

MANAGEMENT SYSTEMS CONTROL IN THE
DEPARTMENT OF DEFENSE

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DEPARTMENT OF DEFENSE

by

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CHAPTER I

INTRODUCTION

Background

During the last two decades, the military departments have developed and produced a wide variety of weapon support systems. Also, they have designed a wide variety of management systems for dealing with these major acquisitions. Each manager has separately wrestled with the problem of devising a system for describing plans, for measuring and controlling progress against those plans, and for recording experience so the estimating and management job could be done better the next time. The net result, predictably, has been a proliferation of systems and concomitant reports.¹

It is axiomatic that the management systems prescribed by the Department of Defense in doing business with contractors can importantly influence the quality of what is delivered, the timeliness of delivery, and the cost. These systems can in themselves be costly or reasonable,

¹ Robert N. Anthony, "Resource Management Systems," Address at the DOD Advance Planning Briefings for Industry, Boston, Mass.: March 3, 1966.

effective or merely burdensome. While they cannot replace motivated management, they can either vastly help or seriously handicap even the most highly skilled and best intentioned manager. On the other hand, such systems frequently can be so numerous, overlapping and duplicative as to submerge a manager in a sea of paperwork.²

The Department of Defense by 1965 was not unaware of the fact that management systems control was a problem. Industry had repeatedly advised the Department of Defense (DOD) that the major, rapidly expanding changes in management controls were impacting broadly across the entire spectrum of its operating functions.³ In principle, industry endorsed the controls as they represented an attempt by DOD to achieve better management. However, industry suggested that in practice and implementation the burgeoning numbers and type of controls may well prove disruptive to good management. In fact five senior advisors from industry reported to the Aerospace Industries Association (AIA) that this collective problem may be the major operational problem facing industry in the foreseeable future.⁴

²George W. Bergquist, "Management Systems and Controls," (An undelivered statement prepared for the Subcommittee on Economy in Government of the Joint Economic Committee, November 13, 1968), p. 1.

³C.R. Lowry, "The Serious Problem Created by Expanded, Uncoordinated Systems Management Controls," A briefing presented to the Aerospace Manufacturers Council, "Seattle, Washington: July 24, 1965. (Hereafter cited as "Uncoordinated Management Controls.")

⁴Data Management Board Report to Mr. K.G. Harr, Jr., President, Aerospace Industries Association, January 1965, p. 1.

In 1966 the Aerospace Industries Association submitted a "white paper" to the top management of DOD suggesting that mutual benefits would result from some type of reasonable control over the greatly increased number of management systems that were being imposed on industry. The central theme of the paper was industry's contention

. . . that the greatly increased number of management systems of all kinds emanating from different functional arms of DOD and the Services, in a variety of forms, from a variety of sources and in a variety of time phasings, often coming in through different doors of industry, have an interrelationship with a cululative effect which is adverse to the mutual objectives of Government and Industry.⁵

The result of the common concern of DOD and the defense industries over management systems control is manifested in a jointly developed program ostensibly designed to be both corrective and preventive. The formal basis for planning and implementing the program was the Department of Defense--Council of Defense and Space Industry Associations (DOD-CODSIA) Advisory Committee for Management Systems Control. The Committee was officially chartered for two years in November 1966; however, that charter subsequently was extended to December 31, 1970. The work of this Committee and concomitant efforts within the Department of Defense and by representatives of industry in developing and planning a program for management systems control is the subject of this paper.

⁵Report on Government Management Systems by the Systems Management Analysis Group of the Aerospace Industries Association (Part I), J.S. Parker, Chairman (Washington, D.C.: May 12, 1966), p. 1. (Hereafter cited as SMAG Report.)

Research Questions

Having set forth an abbreviated background of the subject of this paper, it is appropriate to detail more specifically the particular questions which the paper will address. Paramount among these is a consideration of the role of the Department of Defense in controlling management systems used in the acquisition process.

- Should the Department of Defense control management systems used in the acquisition process?

Certainly it will be necessary to define some terms. For example, does the term "management system" mean the same thing to all persons who use it? Has the definition itself caused difficulty in the attempt to pragmatically implement DOD policy?

- What are acquisition management systems?

As suggested earlier the defense industries were perhaps the prime mover in the establishment of the DOD management systems control program. This paper will examine in some detail the initial and continuing impact of industry's active contribution to management systems control. Indeed the concept of a joint defense-industry committed to deal with a specific mutual problem could itself be the subject of a major academic inquiry. However, this paper will deal with defense-industry relations only insofar as they apply to management systems control.

- What is the interest of the defense industries in management systems control?

The Office of the Secretary of Defense (OSD) is quite different from the Department of Defense. The DOD includes the offices of the Secretary and his respective assistants. It also includes the various services, several other agencies, and the multitude of field activities, ships, and stations. Hence, the Office of the Secretary of Defense is the seat of policy whereas DOD, the entire fabric of the nation's defense organization, is the area in which that policy is implemented. Not unexpectedly policy issuances often do not achieve the effect that the planners had intended. In fact the expressed needs of top management often seem to be in direct conflict with needs at the operating level. Within this context of possible disparate needs, the methods by which the Secretary attempts to implement policy throughout the lower echelons and the particular office he chooses to direct a particular effort are of critical importance.

- How was the program for management systems control established?
- Why was the Assistant Secretary of Defense (Comptroller) selected to head the program?

A corollary to implementation is utilization. Success of the endeavor is measured not so much by the soundness of policy, the effectiveness by which that policy is implemented, but rather by the benefits derived at the user levels. Consequently, the program for management systems control will be reviewed from the vantage point of the field level activities. This

review will focus primarily on the agencies which interface with the defense industries, i. e., the activities responsible for the major DOD acquisitions.

- Has the management systems control program been effectively utilized by the field level activities?

Finally the paper will treat implicitly a number of the problems involved in any vertically imposed program ostensibly designed to correct problems more visible to top management than to the lower level managers who are charged with the responsibility to implement that program.

- Can the Office of the Secretary of Defense effectively exercise top level control of management systems?

Scope of the Study

This paper will be oriented toward the development and implementation of the policies and procedures of defense management systems control. Hence, there will be no attempt to evaluate the relative merits or foibles of a particular system or types of systems used for management control. Similarly there will be no attempt to evaluate the impact of any particular management system or types of system on the defense industries. That such systems do impact and that their cost is ultimately passed on to DOD is accepted as fact.

The scope of this study is chronologically limited to the time frame 1965 through March, 1971. The early boundary is of course established by

the time of problem recognition. The closing date, while primarily for the convenience of the author, coincides with a number of key decisions vitally affecting the program's future. These decisions will be detailed later in the study. However, the program is alive and the drama of its implementation problems is as current as today.

Purpose and Utility

This paper has a single primary purpose: to trace a defense program from inception through early implementation, showing where possible the major obstructions and indicating how some of the problems were overcome.

The utility value rests in several quarters. First, the method by which OSD approached the problem of management systems control is not unique. The problem was surfaced and brought to the attention of top management which in turn assigned staff resources to develop methods for solving it. Certainly the empirical knowledge is in part transferable, and a recording of that experience may serve to guide those responsible for similar projects in the future.

Second, the Acquisition Management Systems Program remains an on-going effort in DOD. This paper, based essentially on primary information, is the first attempt to piece together the many disparate elements of the problem's background and development. Perhaps the advantage of a

historical perspective may highlight current or potential problems and suggest alternative solutions.

Finally, and perhaps a purpose as much as a utility value, the writer feels that this study has swept away many of the imponderables seemingly a part of decision-making at the top levels of defense. Having served in the Office of the Assistant Secretary of Defense (Comptroller) [ASD(C)] during the period March 1970 to May 1971, a part of which was spent as a member of the DOD-CODSIA Advisory Committee for Management Systems Control, many problems attendant to the program seemed to have roots in some rather routine policy decisions. This study has confirmed for the writer that few decisions in OSD can be classified as routine.

Hence what may be classified as a purpose--to find out what happened--has a distinct utility value if that purpose is accomplished and subsequently translated in terms of career development. In the case of the writer, this study--over and above being a scholastic exercise--has an undeniable utility value.

Methodology

As mentioned above, the information for this paper is basically primary. Having served for a period in the section of OSD charged with responsibility for the management systems control program, the writer has a first hand knowledge of much of the data used. This professional intimacy is not

without its shortcomings. First, there is a natural bias on certain matters which could result in misrepresentation. Second, narrative description could be incomplete because the writer's familiarity with a given area may cause him to assume a greater degree of understanding on the part of the reader than warranted by the data presented. Every attempt has been made to avoid these natural foibles.

There is, unfortunately, a more subtle problem involved in the writer's first hand knowledge of the program addressed in this study. The day-to-day communication with both the defense and industry principals in the program clouds the issue of what might be termed privileged communications. Recognizing the potential difficulty of drawing data from personal notes and memory, a number of the principals were interviewed for the purpose of preparing this paper. The data from those interviews then served as a base for the reported findings and conclusions except when there was such a clear divergence between the memory or notes of the writer and the interview comments. These few cases are documented in the footnotes.

In addition to the interviews, the official correspondence files of the Assistant Secretary of Defense (Comptroller), the Council of Defense and Space Industry Associations, the Aerospace Industries Association, and various Department of Defense components and agencies were made available to the writer.

None of the material used during the research phase of this study is

under any form of security classification. Nonetheless, in the judgement of the writer it appeared prudent in some cases to preserve the anonymity of the principals for reasons other than security. Also certain factors which could lead to the identity of persons or offices have been disguised. However, the writer has exercised great care in attempting to present the essential facts precisely as they existed and occurred.

CHAPTER II

WHY MANAGEMENT SYSTEMS CONTROL

Search For A Delimiting Definition

One of the bitter ironies of the defense program for management systems control has centered on the problem of actually defining "management systems." The General Accounting Office pointed out in 1970 "that the most troublesome problem which confronted people was the definition of a management system."¹ The major impart of the definition problem will become apparent later in this study; however, it is significant to understand what the early planners, both for defense and industry, had in mind when they spoke of management systems control.

Dr. Robert Anthony was the Assistant Secretary of Defense (Comptroller) during the period when the defense management system

¹U.S., Comptroller General, "Study of the Program Established to Reduce and Control Management Systems Imposed on Defense Contractors," (Unpublished preliminary draft of a proposed Report to the Congress, August 12, 1970), p. 27. (Hereinafter referred to as "Unpublished GAO Report.")

control program was being developed. Certainly his influence had a profound effect on the program. According to Dr. Anthony, management control is the process by which managers assure that resources are obtained and used effectively and efficiently in the accomplishment of the organization's objectives. It is a process carried on within the framework established by strategic planning. Objectives, facilities, organization, budget, and other financial factors are accepted as givens. The management control process is intended to make possible the achievement of planned objectives within these givens.²

Accepting the above as the classical definition of management control, further refinement is necessary to translate a rather general concept in terms of day-to-day usage. Regretably there was never a totally accurate translation as pragmatic implementation is the judge; however, there was no shortage of attempts.

Industry came up with the first cut at a definition.

The term "Systems Management" is used by DOD in one context and by Industry in another. From DOD's viewpoint, Systems Management are those tools and techniques they use to plan, control, monitor, and audit Industry's Systems Management activities--those which are superimposed over ours.³

²Robert N. Anthony, John Deardon, and Richard F. Vancil, Management Control Systems (Homewood, Ill.: Richard D. Irwin, Inc., 1965), p. 2.

³Lowry, "Uncoordinated Management Controls."

and a second:

We reserve the use of the term "Systems Management" to refer to the efforts necessary to control a weapon system during its development--to integrate its various elements, such as airborne equipment, ground support equipment, and the entire support subsystem area. . . . We define "Management Systems" as the tools and techniques that are used by the Government to control its own internal and (on a rapidly increasing basis) the internal management activities of Industry.⁴

There was no particular disagreement with either of these definitions on the conceptual level. However, defense planners suspected, and rightly so, that a definition so broad would not be usable in the field. When the program was finally launched in 1968, the policy instruction carried the following definition.

Management Control System. An orderly way, generally including a documented procedure, of assisting managers in defining or stating policy, objectives and requirements; assigning responsibility; achieving efficient and effective utilization of resources; periodically measuring performance; comparing that performance against stated objectives and requirements; and taking appropriate action. A management control system may encompass one, several, or all of the above areas. Documents which fall within this definition and include any of the following are parts of management control systems and for purposes of this Instruction shall be treated as management control systems:

1. The generation, preparation, and dissemination to the Department of Defense by a contractor of recurring information.
2. The statement of policies, objectives, responsibilities, requirements, or procedures whose implementation will require the contractual establishment of recurring reporting requirements.
3. The contractual requirement for reporting or action only upon the occurrence of a specific event.

⁴Orv Enders, "Systems Management Analysis Group Interim Report to the AIA Aerospace Manufacturers Council," An oral report, Phoenix, Ariz.: November 18, 1965. (Hereinafter referred to as "SMAG Interim Report.")

4. Specified contractual management reporting control requirements as contrasted with technical data products e.g., drawings, provisioning manuals, training manuals, etc.⁵

To insure no misunderstanding as to what was meant by a management control system, the instruction contained an enclosure which further described the characteristics of such systems. As later field level implementation reviews showed, the attempt to define exactly had resulted in ambiguity and confusion. Notwithstanding, the above definition stood as official from June 6, 1968 to March 15, 1971 when the policy instruction was revised.

Both officially and unofficially it was recognized that the terms "management control systems" and "management systems" were in fact interchangeable.⁶ When asked why the word "control" ever had been included, one OSD staff member stated that "Anthony added it even though we seriously objected. But, he wrote the book."⁷

⁵U.S., Department of Defense, The Development of Management Control Systems For Use in the Acquisition Process (DOD Instruction 7000.6), June 6, 1968, p. 2. (Hereinafter referred to as DODI 7000.6.)

⁶Bergquist, "Management Systems and Controls," p. 2.

⁷Initially there had been some confusion between the two terms. The concept of a "management system" while vague, was at least recognized in DOD. "Management control system" seemed something new, and it really was not. Additionally, the book Management Control Systems, by Robert N. Anthony, et al., did in fact use the term somewhat differently than the way it was ultimately applied in DOD.

The search for a delimiting definition of management systems has been less than successful. However, there are any number of evasive concepts, difficult to define, with which managers must contend in striving for economy and efficiency (two terms which also are difficult to label exactly). In any event the problem with defining "management system" was symptomatic of a number of early and continuing ills which beset program implementation.

Expressed Needs of Industry

One of the prime reasons for the proliferation of management control systems and the reports concomitant to those systems is an organizational fact of life in DOD. Each functional office and each military department has reasonably well defined duties and responsibilities to fulfill as outlined in various statutes, regulations, instructions, and directives.⁸ Naturally, government managers are deeply concerned with seeing to it that these duties and responsibilities are fulfilled as efficiently and effectively as possible. From the point of view of the taxpayers, there should be no other approach.

This concern by the functional offices and the services for proper discharge of their assigned tasks is manifested in a number of different ways.

⁸Albert W. Buesking, Col., USAF, "Management Systems Control," Defense Industry Bulletin, March, 1967, p. 26.

One of these manifestations is a tendency by the government manager to require detailed management procedures, many of which duplicate existing requirements thus spawning an ever widening circle of reports ostensibly used to manage. To say that these requirements are placed on industry deliberately to constrain contractors and to create a paperwork burden completely misses the point. The intent, purely and simply, is to provide defense managers with the tools and data to do the job that has been assigned in a way that any public figure is expected to function as a guardian of public funds.⁹

The hard fact of the matter was that until the issuance of DOD Directive 7000.1 (Resource Management Systems) in August 1966, there was no central coordinating responsibility for management systems. The individual manager or functional office had no way of knowing the cumulative effect on industry of the separate management requirements levied by defense. As in the case of the patient on the operating table, however well conceived the individual surgical operations performed on him may be, if they are too many in number, performed without regard to their effect on one another, or without regard to their cumulative effect on his system, they can all well be successful and yet the patient may die.¹⁰

⁹Ibid.

¹⁰SMAG Report, p. 3.

It is one of the seeming ironies of the management systems control program that the impetus for corrective action came not from defense, which stood to gain the most, but from industry which at the time was being amply rewarded for supplying whatever information defense chose to buy.¹¹

Certainly there is nothing unusual about industry's initial recognition of the problem of management systems proliferation. Industry was the point of impact. The problem for them was, in simplest terms, how to cope with all the new management controls which were coming in bits and pieces, sometimes inconsistent in their application, usually uncoordinated between the services, or between the services and DOD, and often inconsistent with the old ones which may still be required.¹²

Whatever the case, the customer, DOD, ultimately bore the expense of these multitudinous controls usually on a "cost plus" basis. One of the officials in the Aerospace Industries Association (AIA) admitted that there was some early reluctance on the part of industry to support any effort to

¹¹C.R. Lowry, Director, Aerospace Research Center, Private Interview, Washington, D.C., January 25, 1972.

According to Mr. Lowry DOD pays somewhere between \$2.5 and \$4.5 billion annually for management systems imposed on contractors and the data procured therefrom. Mr. Lowry could not substantiate these figures nor could the writer confirm or deny them via other sources. However, other knowledgeable estimates of the cost were available, and in no case did they go below \$2 billion. One ranged as high as \$10 billion. It is safe to assume that the cost of management systems and resulting data represents a major cost in DOD acquisitions.

¹²Lowry, "Uncoordinated Management Controls."

help DOD bring "their" problem under control. A dollar spent for management system information is just as good as a dollar spent for hardware, what matter that they (DOD) are so stupid as not to realize that the information is worthless.¹³

There is little evidence, however, to support the contention that this opinion ever carried much weight in industry circles, primarily because it represented a rather naive view of the total impact of the problem on industry. First industry was legitimately concerned about their ability to effectively price the cost of management information provided defense. One of the early reports on the subject stated that "the problem is compounded by the fact that management controls come in special doors of our own companies and there receive uncoordinated treatment."¹⁴

Second, industry was deeply concerned over the possible morale implications within the firm. One report indicated that

. . . today industry is spending countless hours unravelling the inconsistencies that could better have been resolved before issuance of the documents. When you have seen a committee of a dozen of your best people spend days trying to resolve a problem created by just one conflicting data requirement, you can begin to get the feel for the total impact.¹⁵

¹³Lowry, Private Interview.

¹⁴Lowry, "Uncoordinate Management Controls."

¹⁵SMAG Report, p. 1.

Third, the rumblings about the management systems interface problems in the defense-industry complex were hardly going unnoticed by top management in defense. In early 1965 the Deputy Director of Defense for Research and Engineering was asked who in DOD is responsible for the overall coordination for DOD management systems? He replied,

Gentlemen, the answer to that is simple; the Secretary of Defense or the Deputy Secretary of Defense. I know this may seem not to be a very satisfactory answer but, let me say these are problems of real importance and we do send them up to that level.

It is of course characteristic of "that level" to want not only problems but solutions. That industry fingered the problem is laudable. To say it would not have been surfaced otherwise is ridiculous.¹⁶ Hence, for industry to take the initiative was both logical and politically propitious.

Finally, it would be a serious disservice not to mention the very real altruistic motivation of industry, especially at the top management level. There was a keen desire to help DOD get its house in order and to ease the building tension between industry and a gigantic defense establishment. In the initial report to the Deputy Secretary of Defense, industry stated that

. . . we share a mutual responsibility to preserve and indeed improve our ability to stimulate hardware innovation and accelerate its subsequent development to provide the nation with the best possible defense products.¹⁷

¹⁶In the private interview Mr. Lowry indicated that DOD would not anytime soon have been aware of the magnitude of the problem, hence, would have done nothing about it. As will later become apparent, the facts simply do not support his observation.

¹⁷SMAG Report, p. 2.

In fulfilling that responsibility industry offered its "direct and full assistance to help resolve the problem" of management systems control.¹⁸

Industry was prepared to make good on that May 1966 promise. With the AIA as a collective vehicle, they had prepared a plan of action. On July 24, 1965 Mr. Lowry presented to the Aerospace Manufacturers Council a briefing entitled "The Serious Problem Created By Expanded, Uncoordinated Systems Management Controls." This briefing in summary suggested the seriousness and pervasiveness of the problem to industry and proposed a three-pronged plan¹⁹

. . . to assure an orderly, coordinated Systems Management Program within DOD which will result in adequate control and better management for the customer without imposing unnecessary or conflicting controls upon the Industry.

The elements of the plan were:

- Each company within the AIA would provide the Association with a single, coordinated corporate management position which reflects a balanced opinion of functional and divisional policies.
- A small committee within AIA would direct a specially formed ad hoc working group charged with the task of identifying and analyzing all the major conflicts between the corporate management positions and DOD. The end

¹⁸Ibid., p. 3.

¹⁹Lowry, "Uncoordinate Management Controls."

product of this committee would be an Industry white paper identifying the conflicts and their impact, and with recommendations for necessary change.

- The AIA would present the report of analyses and recommendations to the Secretary of Defense, and offer the services of Industry and the Association to help implement a corrective program.

The plan was accepted, the committee and working groups were formed.²⁰ On November 18, 1965 the now entitled Systems Management Analysis Group (SMAG) presented its interim report to the Aerospace Manufacturers Council of the AIA. This report suggested that three recommendations should be made to DOD:²¹

1. Establish central responsibilities for management systems.
2. Management systems be acquired and controlled by formal and proven techniques.
3. Management systems be based upon a full understanding of both industry's and government's problems.

The chairman of the committee further suggested that a "soft-sell" approach be used, and that the presentation on the DOD secretariate level could be very informal. After all, of the three recommendations industry planned to

²⁰In the private interview Mr. Lowry stated: "This action was unprecedented. The Board had never before appointed an ad hoc working group to review alleged problems with DOD. Normally we would simply call their attention to the matter but this time we started the ball rolling."

²¹SMAG Interim Report.

make, two were nothing more than sound management practices and the third, central responsibility, a positive method for insuring the other two were accomplished. Anything other than "soft-sell" and informality would have been a fuss and fanfare suggestion that DOD's top management either did not know what was going on in their organization or could not do anything about it if they did.²²

The policy levels at industry was dutifully impressed by the findings of the ad hoc committee and soundly motivated toward achieving a solution. By May 12, 1966 industry was prepared to present its case to DOD.

The exercise was not taken lightly, by industry or defense. In attendance at this landmark meeting were the people with the power to get the job done. The presence of the top men from industry was the key indicator that AIA had something to say.²³

Similarly, presence of the top men from DOD was the key indicator that defense was ready to listen. In attendance were:²⁴

For the Department of Defense:

Hon. C.R. Vance	Deputy Secretary of Defense
Hon. R.N. Anthony	Assistant Secretary (Comptroller)
Hon. A. Enthoven	Assistant Secretary (Systems Analysis)
Hon. J.S. Foster	Director of Defense (R&E)
Hon. P.R. Ignatius	Assistant Secretary (I&L)
Mr. C.M. Bothmer	Executive Secretary, DIAC

²²A SMAG working group member later said: "We just proposed the same type treatment for DOD's top management that we give our own."

²³Lowry, Private Interview.

²⁴SMAG Report, p. 1.

For Aerospace Industries Association:

Mr. J.S. Parker	Chairman of the AIA Board of Governors and Vice President & Group Executive, Aerospace & Defense Group, General Electric Company
Mr. W.M. Allen	Member of the AIA Board of Governors and President, The Boeing Company
Mr. J.W. Guilfoyle	Member of the AIA Aerospace Manufacturers Council and Vice President, International Telephone & Telegraph Corporation
Mr. K.G. Harr, Jr.	President, Aerospace Industries Association
Mr. C.R. Lowry	Director, Aerospace Technical Council, AIA

The SMAG Report is an impressive two volume document with which the titans of industry were very pleased.²⁵ The central theme of the report, as mentioned earlier, is the cumulative adverse effect on both government and industry wrought by the greatly increasing number of management systems. There were other key issues:²⁶

- . the problem of conflicts between management systems;
- . the need for mating appropriate systems with the nature of the acquisition;
- . the need to tailor the degree of management to the complexity of the program involved;
- . the need for careful examination of each new management system before its adoption to assure its consistency with the overall body of DOD policy; and
- . the need to assure that a new management system is, in fact, worthwhile when considered in light of the expense involved in its application.

The SMAG Report was diagnostic--complete with a select number of

²⁵Lowry, Private Interview.

²⁶SMAG Report, pp. 2-10.

horrible examples--and prescriptive--it presented the embryonic structure for a DOD program to manage management systems. Finally, it suggested the action necessary to carry out that program. Paramount among those suggested actions was a recurrent theme.

. . . whatever else is required to get this situation on course, one key element is identifiable today; i.e., the need for centralized responsibility for management systems. By this we mean that one office in DOD and one office in each Service should be delegated direct responsibility for the effectiveness and efficiency of all management systems under their jurisdiction.²⁷

During the course of the meeting, Mr. Allen suggested to Mr. Vance that any exercise attacking the problem should in fact remain under his control.²⁸

The theme song of high level centralization had been played repeatedly through all the industry background sessions and problem study groups. This opportunity to play it before DOD officialdom was not to be lost. Perhaps industry was off key or, as the Blue Ribbon Report later suggested,²⁹ defense may have been tone deaf.

Where to place the program for management system control, if there was to be such a program, had been decided before that day. But even if

²⁷Ibid., p. 3.

²⁸Lowry, Private Interview.

²⁹Report to the President and the Secretary of the Department of Defense by the Blue Ribbon Defense Panel, Gilbert W. Fitzhugh, Chairman (Washington, D.C.: Government Printing Office, July 1, 1970), p. 83. (Hereafter cited as Blue Ribbon Report.)

industry had missed the mark in aiming at someone other than the Comptroller, one thing was clear--they had delivered a very strong serve, and the ball was in DOD's court.

Position of the Department of Defense

The information in the SMAG Report probably came as no surprise to most of the DOD representatives present when the "white paper" and briefing were presented. And least surprised of all would have been Dr. Robert N. Anthony, who had been the Assistant Secretary of Defense (Comptroller) since November 1965. Dr. Anthony was the author of several texts on management control, he taught the subject at Harvard, and he ostensibly was well-versed with the problems of industry. Other evidence notwithstanding, it hardly seems possible that he above all the others was not prepared to hear what industry had to say.

And there was other evidence. In a speech delivered January 19, 1966, Dr. Anthony alluded to strengthening the DOD management control system even though

. . . the word 'control' seems to have a bad connotation to many people--standing, erroneously, for restrict, restrain, inhibit, and the like. The phrase 'resource management system' which means substantially the same thing seems more palatable.³⁰

³⁰Robert N. Anthony, "What's Ahead," Address to the Washington Chapter, American Society of Military Comptroller, Washington, D.C.: January 19, 1966.

A month later he stated:

There is no way of preventing uncoordinated [management control] systems from springing up, but these should be kept to a minimum. The Office of the Secretary of Defense will prescribe top management information--the general principles, definitions, and uniform practices that are necessary for overall consistency.³¹

And in March:

Common sense suggests strongly that the Defense Department and industry would both benefit from a concerted effort to achieve balance, compatibility, simplicity, and an adequate measure of uniformity among the multitude of management systems already in existence or under preparation within the Department of Defense.³²

In fact at the very time that the SMAG Report was being presented, Dr. Anthony's knights in the Pentagon were busily preparing a directive which would make him the most powerful defense comptroller since the days of Wilfred J. McNeil. The title of that directive was to be "Resource Management Systems." The representatives of industry may not have been privy to this information; however, there was nothing secretive about the speeches mentioned above.

As earlier indicated, industry would like to have gotten the program placed right in Secretary Vance's office, but there really was little hope of

³¹Robert N. Anthony, "Management Control Systems," Address to the Management Analysis Symposium, Washington, D.C.: February 15, 1966.

³²Anthony, "Resource Management Systems."

that. Their second choice was to see the program under the Assistant Secretary of Defense for Installation and Logistics, Mr. Paul Ignatius.³³

The logical choice from the defense point of view normally would have been Installation and Logistics because of the vast procurement authority vested in that office. Recognizing this fact, AIA had made informal contact with Mr. Ignatius prior to submitting the formal request to DOD for the May 12, 1966 meeting.³⁴ The writer can only surmise what the relationship may have been between Mr. Ignatius and the Board of Governors of the AIA. Whatever the case, industry, which had been so methodical, so inclusive, so intent in their preparation of the SMAG Report, clearly had misread their target organization within OSD.³⁵

Perhaps the most significant feature of this apparent political blunder was that it was allowed to occur. Again one can only conjecture what Dr. Anthony's approach to the program for management systems may have been had his opportunity to contribute come earlier in the industry planning phase. The role of the defense controller will be presented more fully in later chapters; however, as early as October 1966 it was apparent that

³³Lowry, Private Interview.

³⁴Per minutes of the Aerospace Technical Council meeting held in Washington, D.C., April 20, 1966.

³⁵In the private interview Mr. Lowry stated: "We were impressed by his [Dr. Anthony's] reputation, but we hadn't given much thought to having the Comptroller as lead office. We may have structured our approach differently had we known."

what was to become the management systems control program was not "the" most important thing or even one of the most important things to

Dr. Anthony.³⁶ As the Government Accounting Office (GAO) later indicated:

Problems started to develop early in the program on management systems. Apparently it was recognized . . . that strong management action was necessary if the program steps were to be accomplished. At one point in the program when strong opposition from one sector was emerging, the previous ASD [Assistant Secretary of Defense] (Comptroller) [Dr. Anthony] intended to obtain a decision from a higher level regarding his authority. He was, however, dissuaded from making this move and as far as it can be determined, no action was taken.³⁷

Subsequent to the SMAG Report, DOD had little choice but to respond positively to industry's call to action. The details of that response had to await Dr. Anthony's assignment on August 22, 1966 to "establish the objectives and basic policies for the improvement of Department of Defense resource management systems."³⁸ However, certain features of DOD's positions were immediately apparent:

- The problem of management systems control was recognized as a mutual one for defense and industry.

³⁶George W. Bergquist, Deputy Assistant Secretary of Defense, Systems Policy and Information (also former Chairman, DOD-CODSIA Advisory Committee for Management Systems Control), private interview, Washington, D.C., January 12, 1972.

³⁷Unpublished GAO Report, p. 45.

³⁸U.S., Department of Defense, Resource Management Systems (DOD Directive 7000.1), August 12, 1966, p. 1. (Hereinafter referred to as DODD 7000.1.)

- DOD was interested in pursuing a solution to the problem on a joint basis with industry.

- DOD needed a central coordinating body to act as a clearing house and control point for management systems.

- Unknown to industry, Dr. Anthony was the logical person to head that coordinating body.

CHAPTER III

ESTABLISHING A CONTROL PROGRAM

Resource Management Systems and Coordinating Responsibility

As mentioned earlier, one of the prime reasons for management systems proliferation was an organizational fact of life in DOD. "Simply put, there was no central coordinating responsibility for management systems."¹ That is, there was not until August 22, 1966 when DODD 7000.1 entitled "Resource Management Systems of the Department of Defense" was published. That directive requires that the Assistant Secretary of Defense (Comptroller):

- Maintain an overview of all DOD resource management systems activity, including an inventory of all significant DOD resource management systems, that are either in use or under development.

- Review and approve proposed significant changes in resource management systems or proposed new systems.

- Insure compatibility and uniformity among resource management systems.

- Provide policy guidance for the characteristics of general criteria governing resource management systems.

- Insure standardization of data elements and data codes.

¹Buesking, "Management Systems Control."

Under certain circumstances . . . develop new systems or improvements in existing systems.²

In short ASD(C) was assigned the responsibility to provide for the design and installation of resource management systems throughout the Department of Defense. "In discharging this responsibility, the . . . Comptroller will take the lead in developing certain types of resource management systems." Primarily these are systems that are principally financial information. However, the Directive goes on to specify that the Comptroller will assure ". . . any [newly developed] system meets the criteria for an acceptable system . . . [and] should be advised of plans for a new system or a system change from the outset."³ The criteria to be used in evaluating systems for the management of investment costs will:

Focus on the item being acquired, its quality, its time schedule, and its costs, in terms of both plans and actuals.

Include special information subsystems applicable to acquisitions of selected major capital items.

Be standardized and controlled, to the extent practicable, so as to minimize the data gathering and reporting workload imposed on contractors and in-house activities.

Be structured so as to minimize changes required to accounting systems used by contractors.⁴

Dr. Anthony, and indeed the whole of DOD, used the terms resource management system, management control system, and management system practically interchangeably. In one of his addresses soon after taking office

²DODD 7000.1, p. 5.

³Ibid., pp. 5-6.

⁴Ibid., p. 4.

he stated that ". . . the word 'control' seems to have a bad connotation. . . ; the phrase 'resource management systems,' which means substantially the same thing, seems to be more palatable."⁵ Further Dr. Anthony gave the phrase the broadest interpretation.

A management control system, or resource management system, is a system that aids managers, at all levels in their function of assuring that resources are obtained and used effectively and efficiently in the accomplishment of an organization's objectives. . . . the statement refers to resources, not to money. Although many of the figures in a management control system are expressed in dollar terms, we are fundamentally interested in the use of resources, and not in accounting for accounting's sake. Thus, the budget is expressed in dollars because dollars are the only common denominator that can be used to aggregate men, material, and services; but the real message of the budget is the amount of resources that are to be made available to various functions and organizations. The soldier shoots bullets, not dollars.⁶

It is evident that much of the broad interpretation was ultimately included in Dr. Anthony's resource management charter. In fact the directive states:

Resource management systems are ordinarily described in terms of the flow and processing of information, and the common denominator of this information is often monetary but the information may be nonmonetary.⁷

The directive, then, provided a clear-cut definition of the responsibility required to remedy the organizational condition that was a prime contributor to the management systems proliferation problem.

⁵Anthony, "What's Ahead."

⁶Ibid.

⁷DODD 7000.1, p. 2.

In addition to serving as the vehicle for attacking the issues raised by the SMAG Report, the directive provided the "one key element required to get this situation on course. . . , centralized responsibility for management systems."⁸ The Assistant Secretary of Defense (Comptroller) now had that responsibility. In this major policy document, the "monetary" duties of the Comptroller were, for the first time, inextricably knitted to the informational requirements necessary for acquisition management.

The next section of this chapter will show the expanding role of the ASD(C); however, it is significant to point out two features of that role relative to RMS (Resource Management System) and the attendant coordinating responsibilities:

- The specification of responsibilities and the ability to discharge them are two entirely separate activities; and
- Multiple responsibilities require an ordering of priority for accomplishment.

These two features are practically axiomatic in the field of management. It seems, regrettably, that they were glossed over by those closest to the Comptroller who felt that DODD 7000.1 was the Magna Charta for enlightened management in the Pentagon.⁹ Dr. Anthony and indeed the Secretary of Defense were not going to metamorphose overnight the aged, bureaucratic

⁸SMAG Report, p. 3.

⁹One senior civilian in DOD referred to Dr. Anthony and the new directive as ". . . the management Messiah with commandments in hand, bent on redeeming us from ten years in sin."

practices by simply establishing a set of responsibilities and a system of controls. As the first head of the management system control program said later, "It was going to take a long time to make any inroads at all, and those who became so very impatient with the way we had to do business probably did the program a disservice."¹⁰ An Army officer working with the program in the early days was more colorful in his observation.

It was like trying to drain a swamp. We were caught between the land developers and the alligators. Industry and some of our own staff people were prodding us ever onward. But the rank-and-file organization here [the Pentagon] and in the field would have eaten us alive given the chance.¹¹

Whatever problems may have been implicit in carrying out the policies of DODD 7000.1, it was clear that the coordinating responsibilities rested with ASD(C). Further, it later became clear that Dr. Anthony had indeed assigned some ordering of priorities to the management innovations to be developed under his new charter.

Role of the Defense Comptroller

A large portion of this paper is directed to the background and selection of the Assistant Secretary of Defense (Comptroller) as the czar of Resource Management Systems and consequently, management system control. The primary reason for this approach is the contention that this factor alone was

¹⁰A comment to the writer by Col. A.W. Buesking approximately one year after his retirement from the Air Force.

¹¹LtCol. A.E. Ledwidge, USA, April, 1970.

a major influence on the program's effectiveness. Had OASD(I&L) [Office of the Assistant Secretary of Defense (Installation and Logistics)] or any other suitable top-level office been assigned responsibility for management system control, the present condition of the program may have been vastly different. Investigating this rather broad indictment demands at least a cursory review of the role of the defense comptroller generally, and of Dr. Anthony's part more specifically.

One authority in military matters describes the ASD(C) as the "superego of the Department of Defense."¹² Another indicates that "the most significant application of comptrollership in governments in the country is in the U.S. Department of Defense, where its development coincided with the introduction of performance budgeting."¹³ Mosher best describes why the defense comptroller has had strong backing from his superiors and from the Congress:

The comptrollers represent and even epitomize several related basic motifs in the ethos of military management since the war: the rise to eminence of the fiscal and financial factors, functions, and organizations; the struggle of the principles and techniques of scientific management with those of traditional military and Federal management; the emulation of, and growing dependency upon, businesses and business practices; the establishment of the phrase "efficiency and economy" as a commandant, not merely a slogan; and, in a still confused way, the search for a formula (or perhaps merely a wedge) for more effective control of the military.¹⁴

¹²Samuel P. Huntington, The Soldier and the State (Cambridge, Mass.: Harvard University Press, 1959), p. 437.

¹³Jesse Burkhead, Government Budgeting (New York: John Wiley & Sons, Inc., 1956), p. 259.

¹⁴Frederick C. Mosher, Program Budgeting (Chicago: Public Administration Service, 1954), pp. 191-192.

Just as the power of the Joint Chiefs of Staff extends beyond the purely military, the power of the comptroller extends beyond the strictly administrative and fiscal matters. Apparently lost in a crowd of assistant secretaries on the organization chart, he emerges as the preeminent representative of the civilian demands for economy and efficiency in the military establishment. He is "the principal antagonist . . . within the central defense organization . . . [whose] influence rests on four pillars: theoretical, legal, functional, and personal."¹⁵

The theoretical foundation is the identification of civilian control of the budget. The OASD(C) is principally civilian in both structure and psychology. In 1953, for example, the ratio of civilians to military in the Comptroller's office was over twenty to one, a ratio far lower than that of any other major staff. At present that ratio is even lower (twenty-two to one). The Comptroller's staff and the Office of Management and Budget (OMB) look upon the fiscal-administrative function as the principal means by which the Secretary can control his department. According to Ferdinand Eberstadt, "the budget is one of the most effective, if not the strongest, implement of civilian control over the Military Establishment." This psychological outlook has been carried to the point where cuts in the military budget were made simply on the grounds that they were necessary to remind the military of the supremacy of civilian authority.¹⁶

¹⁵Huntington, The Soldier and the State, p. 437.

¹⁶Ibid.

The legal pillar of influence was an outgrowth of the Hoover Commission Task Force which recommended a thorough overhaul of Pentagon budget procedures and a strengthening of the central budget office. Subsequent to the Commission Report, Title IV of the National Security Act Amendments provided for the Comptroller to supervise and direct the preparation of the DOD budget and generally to supervise the fiscal and accounting aspects for the entire department. Prior to Title IV, one of the three assistants to the Secretary of Defense had advised him on fiscal matters; however, authority and control on these matters had been hazy. Significantly the provision of Title IV in respect to the authority and responsibility of the Comptroller went far beyond what Secretary Forrestal and the President had recommended at the time the Act was passed.¹⁷

The position of the Assistant Secretary of Defense (Comptroller) after passage of Title IV made him a functional unique among federal agencies. Heretofore the interests of economy with respect to an agency's programs had come from outside the agency itself--the Treasury, the Budget Bureau, and the Appropriations Committees. The only other executive agency to have a comptroller was the Post Office which ostensibly was suppose to be run like a business anyway. Now the Department of Defense internalized the representation and implementation of the economy viewpoint. The size of DOD demanded it. The Department of Defense is a government within a

¹⁷Ibid.

government, larger in personnel and funds than all the rest of the national government combined. No outside agency possibly could exercise effective control over its operations. The Bureau of the Budget (OMB since 1970) did not have the staff, knowledge, or influence to master this giant, tax-dollar consumer. Consequently, the centralization of control within the Comptroller's organization enabled a fusion with the Bureau of the Budget to conduct a joint review of budget estimates, a practice not duplicated elsewhere in the government.¹⁸ Thus the Comptroller's office developed as the Freudian superego of the Department: an internal mechanism of restraint and control reflecting external demands and interests. "It was the garrison in the conquered city, giving powerful representation to an essentially unmilitary and alien element within the Department."¹⁹

A final factor in the pillars of influence is the matter of personality. The first Comptroller of Defense, Wilfred J. McNeil, established himself and his office as unique among the civilian leaders in the Department. Serving from 1949 through most of 1955, he performed the same job for the first five Secretaries of Defense. He came to be known as the "virtually indispensable man" of the Pentagon. He imparted to his office knowledge and experience which the military could not rival and which was beyond the grasp of transient political appointees. While the other minions scrambled for

¹⁸Mosher, Program Budgeting, pp. 180-185.

¹⁹Huntington, The Soldier and the State, p. 439.

shreds of authority and responsibility in a dynamic atmosphere, the power and prestige of the Comptroller remained firm.²⁰

The combination of these theoretical, legal, functional, and personal factors put the Comptroller's office deep into matters of strategy and policy. Just as the Joint Chiefs may argue that their advice is solely from the military viewpoint, the current Comptroller, Mr. Robert Moot, argues that he dwells only in the areas of fiscal management.²¹ However, the power and prestige of the office, like the power of the purse, are rooted both in law and pragmatic application. It was against this backdrop that Dr. Anthony introduced the concept of Resource Management Systems.

Dr. Anthony joined the Pentagon team in the last months of 1965. In his first major address, which generated headlines in the business news media, he quoted Secretary McNamara as often recalling the two general instructions given him by President Kennedy in January, 1961. These were in essence:

1. Develop the military force structure necessary to support our policy; and,
2. Procure and operate this force at the lowest possible cost.²²

²⁰A recent manifestation of this continuing power and prestige is the well-founded rumor that the present Comptroller was the only Assistant Secretary seriously considered for the position of Deputy Secretary. His appointment was rejected because the Secretary of Defense felt that the position of Comptroller would be more difficult to fill than that of Deputy Secretary.

²¹Bergquist, Private Interview.

²²Anthony, "Resource Management Systems."

The implementation of the planning, programming, and budgeting systems under Charles Hitch, Dr. Anthony's predecessor, was the culminant response to the first instruction. Dr. Anthony was to make his contribution on the second, or at least that was his intention.

The Five Year Defense Program . . . worked out under the leadership of Charles Hitch . . . gave us a meaningful and orderly program structure against which to budget, account, and measure performance. The task of installing the program structure was so huge that Mr. Hitch decided that full attention should be devoted to it, and that its integration with budgeting and accounting would have to come later. It is this part of the job on which we are now working.²³

Further Dr. Anthony envisioned the "lowest possible cost to procure" and the "lowest possible cost to operate" as two distinct and separate problems.

Fundamental to the concept of our present [Resource Management System] program is the principle that we deal with two essentially different costs--investment costs and operating costs. Investment costs relate to . . . procurement of ships, aircraft, and other capital equipment. Operating costs are the costs of the labor, materials, and service required to operate the defense establishment.²⁴

His charter for dealing with both of these problems was DODD 7000.1. However, there was never any doubt which of the two was most important. "The existing planning and control system for investments is reasonably good . . . and no significant changes are planned. . . ."²⁵ The management systems control program, then, was never intended to promote what

²³Robert N. Anthony, "Closing the Loop," Address to the Financial Management Roundtable, Washington, D.C.: October 25, 1966.

²⁴Ibid.

²⁵Ibid.

Dr. Anthony termed "significant change." On the other hand, Project PRIME (acronym for PRIority Management Efforts) was to be the vehicle for dealing with the pressing problem of operating costs.

Finally in evaluating the role of the Defense Comptroller, it remains to speak briefly of the man himself, Dr. Anthony. Essentially a very shy man, he came across rather abrasively.

I use to watch him in class cut off students almost in mid-sentence, and of course their reaction to the man thereafter was predictable. It took me two years to get to know him, and I couldn't have stuck it out except that I knew he really did not mean to be that way. I somehow got the opinion that he really didn't make it there [the Pentagon].²⁶

There was never any doubt about Dr. Anthony's credentials. Given the problems as he deduced them from Secretary McNamara's instructions, he was the obvious successor to Mr. Hitch. Industry initially was very much impressed with him and early felt that if anyone could abate management systems proliferation, he was the one. "He came on strong, and we felt that approach was essential."²⁷ Apparently, he came on strong too much too often.

He was very impatient with people who had ideas lesser than his own, and this included just about everyone. Unfortunately, he was working with a cocky bunch who were not about to be led around by the nose. Consequently, many of his good ideas never got off the ground. His last months in office were the epitome of frustration.²⁸

²⁶Comment to the writer by one of Dr. Anthony's former research assistants.

²⁷Lowry, Private Interview.

²⁸Comment to the writer by an officer who had served in a capacity that brought him very close to Dr. Anthony.

Stories abound in the Pentagon concerning his problems in that area loosely known as human relations. As one of his underlings phased it, "Everybody respected the guy but few people liked him." His problems in working with the Congress are well documented.

The picture that emerges then is one of a very strong-willed, competent individual filling a position envied by the other Pentagon dukes for its theoretical, legal, functional, and heretofore personal influence. In short, the personal environment in which Resource Management Systems was conceived was tenuous. Further the concept of Resource Management Systems cut across many heretofore sacrosanct boundaries of authority and responsibility, the net result of which was increased power to the Comptroller. The broad range of new authority and control granted to the Comptroller by DODD 7000.1 hardly went unnoticed. As one functionary charged with the responsibility to help coordinate the directive said later, "by the time we got 7000.1 signed off, there was blood in the halls." In fact the directive ultimately was signed by Deputy Secretary Vance over the officially recorded dissent of two assistant secretaries, one of whom labeled the entire proceedings a grab for power. Consequently, the power of the office which should have resulted in an auspicious beginning actually generated a troubled and ill-timed birth for Resource Management Systems and, consequently, the management systems control program. Project PRIME experienced many of the same problems in gaining acceptance; however, its higher priority and broader range of proponents, including the current Comptroller, provided

sufficient support to continue the Project's development. The management systems control program was not destined to receive such support.

Master Plan for Management Systems Control

Subsequent to the SMAG Report there was little visible activity on the management systems proliferation problem until DODD 7000.1 was signed on August 22, 1966. The Report was discussed at a meeting of the Defense Industry Advisory Council in June. Further the industry work group that put together the SMAG Report was asked to provide more detailed work on certain parts of the Report.

With the signing of DOD Directive 7000.1 however, it was obvious that a great deal of background planning had been in progress. Deputy Secretary Vance responded positively to industry's offer to assist the Department in resolving the mutual problem. Also the National Aeronautical and Space Administration (NASA), which was experiencing many of the same basic acquisition problems as DOD, accepted an invitation to participate in the development of a recommended course of action. "Preliminary steps to formulate tasks which needed to be accomplished were taken on October 4, 1966 at a meeting of CODSIA, NASA, and DOD representatives with Dr. Anthony."²⁹

²⁹CDR Edmund M. Waller, SC, USN, "Joint Defense-Industry Project Produces Proposed System to Regulate Development and Application of Government Control Systems," Navy Management Review (August, 1968), p. 10.

A charter was developed outlining the purpose, function, responsibilities, and method of operation of the proposed project. In November 1966 the charter was approved by DOD as being in the public interest thus formally establishing the DOD-CODSIA Advisory Committee for Management Systems Control. The committee was chartered for a two-year period ending November 15, 1968. That charter later was extended to December 31, 1970. NASA early elected to participate only as an official observer.

Staffing for DOD was accomplished under the purview of the Comptroller, and the program leadership is significant. Mr. George W. Bergquist, a career civil servant and comparative newcomer to OSD had recently become Dr. Anthony's Deputy Assistant Secretary for Management Systems Development. He was named to be chairman of the Advisory Committee. The Directorate for Management Systems Control had recently been established, and it was directed to support and monitor the new Committee's work as well as those actions emanating from the efforts that were approved for implementation. The Directorate was headed by an Air Force colonel and was staffed by representatives of the three services and selected civilian employees. On the surface at least, DOD appeared to have provided adequate resources to the new organization.³⁰ Industry staffing basically was the members of the original task group that had prepared the SMAG Report.

³⁰A. Ernest Fitzgerald, Consultant to the Joint Economic Committee of Congress (formerly Air Force Deputy for Management Systems), Private Interview, McLean, Va., Jan. 10, 1972. Mr. Fitzgerald of C-5A fame takes issue with the fact that the program was adequately staffed, and as the senior Air Force representative on the Advisory Committee his comments are worth

A comprehensive, three-phase Master Plan was constructed for the program with the finishing touches being applied in December 1966 at the first full meeting of the Advisory Committee. The plan was approved by Dr. Anthony in January 1967. This approval constituted completion of planning and organization, or Phase I of the Master Plan.

The second phase involved management systems documentation, analysis, preparation of proposals, and drafting a report of findings. Basically this phase centered around the analysis of the need and use of management systems in selected areas. Actual need/use reports were prepared by groups which were unique in that the efforts marked the first time a joint government-industry team of qualified personnel at the top-management level had concentrated on the contractually applicable documents used by DOD for management control. In his direction to these teams, Dr. Anthony stated that "the need/use analyses are the heart of the entire effort because we intend to use these analyses as the basis for changes in our management systems."³¹ The reports emanating from these groups were studied for overlap or inconsistency and the findings integrated into a single multi-volume report.

noting. "[Col.] Bill Buesking [who had been one of Anthony's students] was brought in to work for Anthony somewhere else, and that fell through. He got the Management Systems Directorate as a poor second best and wasn't at all happy about it. When Ron Fox [then an Assistant Secretary of the Air Force] heard that George Bergquist was going to head the Advisory Committee, he protested directly to Anthony and practically got thrown out of his office."

³¹ Robert N. Anthony, Untitled statement before the DOD-CODSIA Advisory Committee for Management Systems Control, Washington, D.C.: May 9, 1967.

Working parallel to the analytical review groups were other teams engaged in preparing the tools and mechanism to prevent uncontrolled development of management systems in the future. By March 1968, the Advisory Committee was prepared to present a report of its work to Dr. Anthony. That massive report included:³²

- An overall set of standards for management control systems to be used in major acquisitions (\$1 million or more).
- Proposed DOD Instruction 7000.6 to prescribe procedures for developing new management systems.
- Proposed DOD Instruction 7000.7 to prescribe procedures for applying management systems in the acquisition process.
- A need/use analysis of selected management systems in five major generic areas.
- A comprehensive inventory of DOD management systems, identified as impacting on industry, which ultimately was to become the Acquisition Management Systems List (AMSL).
- A definition of management systems, and criteria for use in determining whether a system should be included in the inventory.
- A comprehensive plan for implementing in Phase III the recommendations contained in the Advisory Committee Report.

³²Final Report of the DOD-CODSIA Advisory Committee for Management Systems Control to the Assistant Secretary of Defense (Comptroller), Vols. I-IV, apps. A-F, George W. Bergquist, Chairman (Washington, D.C.: March 28, 1968. (Hereinafter referred to as Final Report.)

The Advisory Committee viewed its remaining tasks as having two parts:

- . The preventive job of forestalling undesirable proliferation of management systems in the future, and
- . The corrective job of reducing the existing proliferation identified primarily by the need/use analyses.³³

The tools for accomplishing the first part were at hand: proposed DODI 7000.6, 7000.7, and the Acquisition Management Systems List. Theoretically the preventive measures were fairly simple. DODI 7000.6 would require the submission of a plan to ASD(C) for any new management system or for any substantive revision to an existing system. In conjunction with the OSD office having functional responsibility for the system, he would approve the plan or recommend changes. The originating office then would develop the new system, coordinate it within DOD, allow industry review as considered appropriate, and submit it to ASD(C) for final approval and inclusion on the AMSL.

The AMSL is a compilation of all management systems identified as impacting on contractors. Therefore, it would serve as a mechanism to check the proliferation of management systems because only documents listed therein could be imposed contractually. The AMSL was to be maintained centrally by ASD(C), using automatic data processing methods for update. Periodically it would be published and distributed.

³³Ibid., Vol. I, p. 2.

Department of Defense Instruction 7000.7 was to serve as a guide for selecting systems from the Authorized Management Systems List and applying them on contracts. The objectives of the Instruction were to assure that the systems selected were actually used to assist in managing the acquisition rather than as ends in themselves; to identify factors which should be considered in judging the nature, scope, and appropriateness of the system; and to describe the level of management to be considered and reflected in the application of the system.³⁴

The second part of the remaining tasks, correcting existing proliferation, was recognized as being both more difficult and of lesser priority than implementing the control features of the program as soon as possible. Time was the enemy of future control, but the ally of attrition among present systems. Many present systems would simply fall into disuse due to obsolescence. Further, the original inventory of over 1200 systems, many of them unearthed in the need/use analysis, would have to be attacked on a one for one basis, thus demanding a large commitment of resources to the effort. This effort would have to be made and Phase III contained plans for it. However, the control tools were ready to use now and over two years had elapsed since the SMAG Report. DOD Instructions 7000.6 and 7000.7 were signed into effect on June 6, 1968 by Dr. Anthony.

³⁴U.S., Department of Defense, The Selection and Application of Management Control Systems in the Acquisition Process, (DOD Instruction 7000.7), June 6, 1966, pp. 1-4. (Hereinafter cited as DODI 7000.7.)

Department of Defense Instruction 7000.6 and 7000.7 were probably the theoretical giants of their time.³⁵ The Advisory Committee Final Report was not far from the mark in terming these efforts

. . . the product of a tremendous amount of objective analysis, thought, writing, debate, testing, and editing. Every word stands for pages of documentation, and hours of discussion. It speaks to and for the public interest. . . . Every participant brought fresh initiative and openness to the task.³⁶

Perhaps they were too theoretical and too gargantuan. Certainly they were two of the longest policy documents ever to be issued by the OASD(C).³⁷ DODI 7000.6 was twenty-seven pages long and 7000.7 was twelve. Successful implementation of course, required that the documents be understandable at the field level. However, an aide to the Navy Comptroller pronounced openly and unabashedly that he "didn't understand the damn things and neither did anyone else in the Navy."³⁸ This observation may in part explain why the Navy has never officially implemented the Instructions (or DODD 7000.1 for that matter) even though the Navy has embraced a number of the concepts contained in these documents.

Also there were major political factors at work inimical to the program. Deputy Secretary Vance, an early proponent, had been replaced by Mr. Nitze,

³⁵Bergquist, Private Interview.

³⁶Final Report, Vol. I, p. i.

³⁷The average length is about six pages.

³⁸Although the officer was open in his criticism at the time, the writer doubts that he would appreciate being quoted.

formerly the Secretary of the Navy. Although not openly opposed to the concept of management systems control, there is no record of his ever having actively supported it either by word or deed. Dr. Anthony was serving his last months in office, soon to be replaced by a career civil servant more attuned to the budgetary functions of comptrollership. Finally, Secretary McNamara had left the Pentagon in the spring of 1968, and his philosophy of top level management and control was on the wane.

The management systems control program, although based on a firmly established material need, was the epitome of centralized management. Certainly it wasn't unusual for a Comptroller sponsored project to be run from the top down. As earlier indicated his office had always been the nucleus of a power structure. However, even perennial power structures experience ebbs and flows. There is of course, ample reason to question the type of top level support Dr. Anthony would have provided the management systems control program had he remained in office. But his departure, coupled with an almost department-wide reaction against the McNamara methods, signaled the end of an era in the Pentagon--an era characterized by highly centralized management. It was hardly a propitious time to usher in a fledgling program developed by the old school. But that is exactly what happened in the summer of 1968.

CHAPTER IV

IMPLEMENTATION OF MANAGEMENT SYSTEMS CONTROL

Field Level Implementation Policies, Procedures, and Problems

The procedures by which DOD policy documents are implemented in the field are, at the same time, both simple and involved depending on the impact the particular document may have at each level of command. Both DODI 7000.6 and 7000.7 carried the usual paragraph on "effective date and implementation" stating that the instructions were effective immediately and that copies of all implementing documents were to be forwarded to the OSD originating office within ninety days. What the ninety day limitation means is that within the specified period ASD(C) expects to see the amplifying procedural documents issued by the next lower echelon of command; in this case each of the Armed Services.

Often there is only minor procedural detail which the service headquarters can specify; hence, the basic instruction will be fed to all subordinate commands with little more than a covering letter, and this is the document which ASD(C) should see within ninety days. The commands are

then free to set up the specific procedures applicable in each particular case, subject to later inspection during the normal administrative routine. The procedures may be complicated or not, but generally they can be developed and concomitant problems resolved without further activity on the part of the originating OSD office. Conceivably an entire tree of procedural instructions could develop from one OSD policy document, again depending on the impact down through the various subordinate levels. This was in fact what should have happened with DODI 7000.6 and 7000.7.

There were two reasons for a procedural snowball effect from these policy documents. First, the centralization of final authority in OASD(C) carried the implicit demand that each lower echelon establish its own review and approval procedures for information flowing upward. Second, DODI 7000.7 contained the rather ominous sounding phrase: "These requirements and procedures shall be disseminated to all echelons, including the lowest level of contractor interface." There was no argument with the fact that both instructions contained requirements which would impact these lowest levels; however, the procedures were hardly suitable for use at all these levels. The services then had the immense job of interpreting some rather abstract concepts. One major acquisition office in the Air Force immediately and informally asked for clarification on a number of what later were acknowledged as valid questions, only to be thwarted with the response that "we make policy, you carry it out."¹ Later contact with subordinate

¹Paul Wight, Management Systems Control Project Officer, Department of the Air Force, Private Interview, Washington, D.C., January 11, 1972.

commands in the field left little doubt that confusion reigned as to the best method for complying with the instructions and whatever additional procedural detail the respective services had provided. Ironically, there was almost universal agreement that the reasons for the instructions were valid--management systems were too many, too detailed, and too expensive. Further the managers needed some help in selecting the systems necessary to managing the major acquisitions. But underlying the basic agreement was the sentiment that "the management systems control program was just another headquarters bright idea pushed to the field without adequate thought to making it work."²

Subordinate to (although perhaps a part of) the pragmatic reservations on just how to comply with the instructions was open hostility to the concept of prior approval from OASD(C) for all new systems development or major revisions. This concept had been attacked as unrealistic when the instructions were being prepared. The Navy had pointed out that the total chain of approval up and down the line could take as long as forty weeks. Further, the approvals were, in some cases, duplicative. And finally the expertise and manpower necessary to perform the centralized review and control was questionable. The Air Force felt this feature was inimical to current acquisition techniques. Requirements for all management systems could not all be identified far in advance of actual need, and modifications to existing systems (and the need

²Maj. D. R. Barron, USAF, Management Systems Control Project Officer, Air Force Systems Command, Private Interview, Washington, D. C., January 11, 1972.

for new ones) often was a factor during contract definition or even after contract awards. Consequently, the entire acquisition process could be interminably delayed.³

The approval cycle concept also ignored an organizational fact of life in the military environment. A lowly manager in some major acquisition command is not about to present some embryonic staff work on a proposed management system to his superiors. Nor is the command about to forward up the chain of command a half-baked management systems scheme. Completed staff work is expected at all levels; hence, a proposed new management system, or a major revision, would be full-blown before OASD(C) ever knew about it. By this time there would be a large commitment of resources to an already determined need by the developing command. Otherwise, work on the system would never have been sanctioned by the command in the first place. OASD(C) would then be reduced either to rubber stamping the system or defending the reasons for not granting approval. Hostility to the concept notwithstanding, the elongated approval cycle was included in the instructions with OASD(C) having the final approval authority.

As a predictable consequence, the approval procedures were largely disregarded. No systems were formally submitted for approval during 1968, and eight months after issuance of the instructions the Comptroller placed a moratorium on the requirement for approval by his office. Approval authority

³Unpublished GAO Report, p. 23.

was instead delegated to the service secretaries. That moratorium continued in effect until the basic instructions were revised in March 1971, at which time top level approval was eliminated.

That was the first in a series of retreats from industry's continued theme of top level, centralized control. Indeed this step was protested vigorously by the industry representatives on the Advisory Committee. Some time later one official suggested that this compromise was the beginning of the end for industry. "We never could summon much support from our members for the program after the moratorium."⁴

In addition to procedural difficulties with the instructions, the catalog of management systems was something less than a credible document. This catalog went through various phases of development with concomitant name changes and presently is referred to as the Acquisition Management Systems List (AMSL).⁵ Since only those documents which appear on the AMSL may be imposed on contracts, it ostensibly serves as a restraint on the proliferation of management systems used in major acquisitions (over \$1 million).

⁴Lowry, Private Interview.

⁵The first inventory was compiled into an "Initial List." This comprehensive listing of documents was gathered by the Advisory Committee to determine which of those included were indeed management systems. Four "Interim Lists" were published between October 1968 and May 1970, and documents listed therein could be used on contracts. The first "Authorized List" was published in July 1970. This list, much reduced in size from the Interim Lists, reflected the recommendations of the RAGS (Review Analysis Groups). In March 1971, the list was reissued concomitant to the revision of the basic instructions, and the name was changed to the "Acquisition Management Systems List." For convenience this last name has been used throughout to refer to all the previous listing except where specifically noted.

The current AMSL evolved through a progression of reviews and refinements. The initial list was an outgrowth of the Need/Use Analysis performed during Phase II. Additionally, a DOD-wide inventory was conducted in order to accumulate all documents representing what might be defined as management systems. Of course the inventory was less than exacting, primarily because there really was no clear definition of what constituted a management system. Consequently, the original draft contained over 1200 documents consisting of directives, regulations, specifications, standards, technical data items, etc. This draft, dated March 18, 1968, was to be the vehicle for the first "clean" inventory to be published after the instructions were issued.

The Master Plan envisioned that each document on the draft listing would be "scrubbed" early during the implementation phase by applying the guidelines and criteria set forth in the basic instructions. Satisfactory documents would be included in the AMSL; others would be included subject to subsequent modification; some would be cancelled. The review procedure would be carried out over a two year period, and by 1970 the AMSL would reflect all current management systems permitted on contract. This plan, while seemingly a reasonable approach to a herculean task, was not without its policy problems.

Concern immediately arose within OSD that ASD(C) had unilateral authority to purge the list and cancel documents without consulting with the particular functional element having responsibility for the document.

The services, sensing another Comptroller power play, literally ran for cover.⁶ Where there initially had been a great movement to insure one's management systems were listed, now the services wanted them off the list for fear they would be cancelled or marked for laborious, supervised review. Eventually a review program was announced in which the Comptroller would be responsible for supervising the review function, while the particular service or OSD component primarily concerned with the document would be responsible for the detailed review.

Significantly, this was almost precisely the type of review envisioned in the Phase III Master Plan as one of the tasks involved in correcting existing proliferation. However, the OASD(C) had been unable to establish final review procedures because of the problems with the initial management systems inventory. As a consequence the schedule was slipped, and the first edition of the AMSL, with little improvement over the initial draft, was published in October 1968. The damage was done: a poor listing had been sent to the field confirming the activities' earlier observations that the program was of little value to them.

A later section of this chapter will deal with the work of the Review Analysis Groups (RAGS) which were formally established to review and analyze the documents listed on the AMSL. Prior to submitting the total inventory to the RAGS, there was indeed a "non-management systems" scrub of the AMSL

⁶As one Navy Comptroller official stated, "We were having enough problems without taking sides in an ASD tug-of-war. We had been involved in too many of them in the last two years."

performed by OASD(C) in cooperation with members of the Advisory Committee. This review ultimately resulted in the removal of some four hundred documents from the AMSL. The services and OSD components were afforded the opportunity to reinstate any document removed, but there were no protests. In fact the services were pleased with the massive purge in that it removed many of their documents from the scrutiny of the program. A dangerous precedent had been set and confirmed--if not on the list, it isn't a management system and is not within the purview of the program.

In addition to policy problems with the AMSL, there were numerous mechanical problems. The plan to computerize the list with on-line updates and programmed print-outs was poorly conceived. One edition was five months between going to the printer and distribution in the field. Minor editorial changes made by the activity having responsibility for a particular document were seldom provided to OASD(C). In fact it was estimated that 75 per cent of the listings in the May 1969 issue were in error.⁷

The AMSL was gradually improved and did become a more credible catalog for the acquisition manager. However, it continued to suffer from the ill fame it so richly deserved during early field level implementation. Regardless of the content or mechanical improvements made in the AMSL, it remained the handmaiden of the policy and procedures of the basic DOD instructions.

⁷Unpublished GAO Report, p. 33.

A final consideration of field level implementation policy and procedures is the relationship of the management systems control program to the Armed Services Procurement Regulation (ASPR), a ponderous volume of over 3000 pages.

For a number of years ASPR has served as the DOD procurement problem whipping boy, and not without cause. In the current dynamic environment, procurement regulations should be reasonably responsive to the need for change. The Armed Services Procurement Regulation can be modified, but the procedures are almost as ponderous as the Regulation itself. This is not to say that ASPR should be responsive to capricious change--certainly it should not. However, it should be responsive to major policy changes within DOD which have an impact on contracting procedures--and it is not.⁸

The Armed Services Procurement Regulation is rooted in law. It is the governing regulation which sets up in finite detail the intricacies of defense procurement. As one critic stated: "It tells you every way possible to close the barn door after the horse has been stolen." But whatever the foibles of ASPR, it is the contracting officer's bible and for the management systems control program to be made binding on contractors, the bible needed a few new verses. The keeper of ASPR, again by law, is ASD(I&L), the czar of defense procurement who administers the Regulation via a permanent

⁸This paragraph reflects the opinion of the writer who has had over a year's experience dealing with the ASPR Committee.

committee. It should be noted that the inflexibility of ASPR seems to represent Congressional desires rather than DOD policy; however, both ASD(I&L) and the ASPR Committee are zealously attentive to those desires. Equally so, the contracting officers in the field are attentive to ASPR. It was imperative that the Regulation be modified to include provisions for the management systems control program, ideally at about the same time the policy instructions were issued. This was not to be.

Concurrently with the work of the Advisory Committee, OASD(C) was planning the best method for incorporating the program into ASPR. Basically there were three problems: the proper delegation of authority without any dilution of assigned responsibility to either ASD(C) or ASD(I&L); the procedures for reviewing current and new systems while avoiding conflict with ASPR or the ASPR Committee; and, the resolution of whether a management system should in fact be a part of ASPR or listed in the AMSL.⁹

Again it was a matter of too little too late, primarily because of slippage in scheduling and the difficulty in preparing a viable management systems list for use in the field. In April 1968 it was agreed that those portions of management systems which would directly impact on contractors should be listed as an ASPR supplement. Not until the instructions were issued (without ASPR coverage) was it recognized that the preparation of such a supplement would clearly be redundant to the AMSL and would serve

⁹Unpublished GAO Report, p. 41.

no useful purpose. The fault for the delay however was not with OASD(C).

"They [I&L] thought we were encroaching on their territory and only the sight of that 1200 document listing, to be published as a supplement, changed their minds."¹⁰

Consequently, program procedures and appropriate language for ASPR were submitted to the ASPR Committee in July 1968, one month after issuance of the instructions. Several rewrites and two months later the Committee appeared to have resolved all major obstacles in language and procedures, and the contractor interface would receive ASPR coverage. Again, there was a delay.

The Defense Supply Agency (DSA), the DOD component charged with the responsibility to procure most of the services' commonly used items, appealed to the ASPR Committee to exclude certain types of commodities and procurement actions from the management systems program coverage. These exceptions would have resulted in major changes both in program language and concept. "Evidence indicates that DSA feared the program may have seriously modified their contracting methods."¹¹ In fact the program was never designed to impact on "off-the-shelf" buys which constitute the bulk of the DSA procurements. This impasse was solidified by several major acquisition activities complaining on the one hand that the program could not

¹⁰Comment to the author by CDR Edmund M. Waller, SC, USN, a former member of the Management Systems Control Division, April, 1970.

¹¹Ibid.

be fully implemented without ASPR coverage and, on the other hand, that the program was so muddled that it would be impossible to legally impose it on a contractor even with ASPR coverage.

This brouhaha finally was quieted in March 1969, and ASPR coverage eventually was issued in May 1969--almost a full year after the implementing instructions. The delineation of authority between the program (including provisions for the AMSL) and ASPR was clear enough; there was some conflict between listings in the AMSL and management systems integrally a part of ASPR, but this was not a major problem. The major difficulty, which should not have been surprising in view of the ambiguity of the instructions, was the lack of precise procedures for pragmatically coupling the program with the contracting interface.

The four major top level contributions to field level implementation were DOD Instructions 7000.6 and 7000.7, the AMSL, and ASPR coverage. Each had a particular function in the total policy and procedure montage of the management systems control program. Each experienced very serious, often interrelated problems in the field level implementation process.

Field Level Control and Coordination

The management systems control program had no "built-in" control devices by which OASD(C) could continuously monitor its operation. No regularly recurring reports were required from the field, and as mentioned

earlier, the exact manner of program implementation was a matter for the services and lower echelon commands to resolve.

It bears repeating that the products which ultimately reached the field were an unusually vague potpourri of policies and procedures which made implementation no small task for the field level command. The Navy, for example, more from frustration than conscious decision simply passed out DOD Instructions 7000.6 and 7000.7 and informally instructed commands to do the best they could with them. The Army and Air Force did attempt to knit up the shreds of policy and procedure left dangling in the instructions, but with uncertain success. The point is that the program was primarily a self-controlled operation with OASD(C) becoming involved only on an exception basis. The Directorate for Management Systems Control should be notified on new systems and major revisions; also, that office was to be advised on minor revisions in order to update the AMSL. Otherwise program control was a function of the field level activity having management and contracting responsibility for the particular acquisition. It is important to review generally how that control might work, understanding that the detail would vary considerably.

The program, as envisioned, was to provide tools and ideas to help the manager do a better job. This is the manager who actually is suppose to be determining what he needs in the way of information and data from the contractor. On a large contract of course there would be many managers each with his own (or superimposed) data or information requirements which

the contractor would have to meet. Of course not all these types of requirements relate to management systems (a technical specification, for example), and it often was difficult if not impossible, to judge what actually fell within the purview of the program. Hence, the insidious problem with the definition of a "management system" was very real very early in implementation.

On a conceptual basis the manager was suppose to use whatever his service had provided him in the way of policies and procedures to construct a mental framework for his particular management needs. Within this mental framework he was then to consult the AMSL and select those management systems which would fill his needs. Should he not find such a system, he could develop his own by going through the torturous review and approval cycle discussed earlier--not a very realistic alternative. Or he would develop something which would give him what he needed and "define away" the fact that it was indeed a management system. Finally, he could use a document, procedure, routine, etc., not listed in the AMSL and again "define away" the fact that maybe his choice really was a management system that should be in the AMSL. Consequently, there was little stimulus for the manager in the field to be enamored with the management system control program unless the AMSL would serve as a complete catalog, thus making his management systems selection job easier. He could hardly be expected to have an abiding interest in improving the Acquisition Management Systems List for some manager to use in the distant future. Also, the tools for helping him construct

that mental framework often were no more than the two DOD Instructions which were both abstract and abstruse.

The only tangible manifestation that the manager had indeed gone through the management system selection process was a form called the "Management Systems Summary" (DD Form 1660). This form was to be completed by the manager and forwarded to the contracting officer for inclusion in the contract. As envisioned the form would serve two basic purposes:

It provided a single place in the contract instrument to summarize the management systems used to implement the management plan.

If completely and correctly prepared, it would provide the vehicle for verifying whether or not adequate provisions had been made for managing the acquisition.¹²

The DD1660 would be verified by the contracting officer in accordance with the provisions of ASPR and would become a legally binding part of the contract. The form then could be used as a type of internal control and would, of course, be subject to audit by higher echelons.

These procedures, seemingly simple enough from a functional point of view, were not without problems. For example, the DD1660 was not going to be any better than the source of its entries--the AMSL. Also the contractual nature of the form seemed to put the contracting officer in the position of "approving" the management systems (or management plan), a misconception fostered in part by the form itself which contained signature space for both the person preparing it and the person approving it.

¹²Acquisition Management Systems List (DOD Manual 7000.6M), March 15, 1971, p. vi. (Hereafter cited as AMSL.)

the not uncommon eventuality that different people may prepare a DD1660 for the same contract, but the project (or acquisition) manager would ultimately approve the total list selected. Significantly some contracting officers actually interpreted ASPR to mean that they were indeed the approving authority, a situation which hardly enhanced the program's prestige at some activities. Coordination between the manager and the contracting officer was expected; however, the systems selection process was fully the responsibility of the manager.

Finally, there are many DOD major acquisitions where the contracting officer and the manager are not even attached to the same activity. In these cases coordination between the two often was very difficult. If the manager was not an active supporter of the program, and there seemed little reason for him to be, the contracting officer could do nothing more than insure that the DD1660 had been prepared in accordance with ASPR. In most activities where coordination between the manager and the contracting officer has been tenuous for whatever reasons, the DD1660 is just one more form to be prepared in order to comply with the letter of the law.

There were several early attempts by the OASD(C) staff to shore up field level control and coordination. Foremost among these efforts was the "Self Teach Briefing Kit" project which actually was not a part of the Master Plan. Initially there were no plans at all for the field level training. This project was the direct result of pleas for "how to do it" type instruction. A complete training program was developed and presented to the chief

management and contracting personnel at a number of major acquisition activities, primarily in the Washington area. This program was quite exhaustive and took over four hours to present in its entirety. The purpose was to make "experts" out of those attending. In a six month period, over one thousand people were exposed to the program. Each attendee was given the "Self Teach Briefing Kit" to use in furthering the information within his activity. This kit, which contained both slides and narrative, was reasonably inclusive and should have been sufficient for the disciples to spread the good word. It is difficult to measure what the success of this particular effort might have been because of the multitude of problems impacting on the program during the early days of implementation. Time continued to sap the initiative from the program and the disciples. Effective program implementation was delayed first by the late issuance of the AMSL and later by the difficulty with securing ASPR coverage. There simply was no real sense of urgency to develop any formal training programs in the field until OSD could get the entire program in order.¹³

In addition to the "Self Teach Briefing Kit" concept, the staff members (primarily the military ones) made a number of so-called troubleshooting visits to activities requesting assistance with implementation problems. Again it is difficult to assess the overall value of these visits because of the delays in mixing all the ingredients necessary to make the program work. Usually

¹³Unpublished GAO Report, p. 37-38.

the problems were very general in nature and the solution, if there was one at the time, was sufficiently lacking in detail to be of much significant value. Probably the most laudable thing that can be said of these early visits is they convinced the activities that someone up there really was interested.¹⁴

Policy Developments During Implementation

A number of major policy developments having an impact on the management systems control program already have been cited; for example, the departure of Secretary McNamara and then Dr. Anthony and the subsequent shifting away from centralized management. These and other policy developments had some rather dramatic effects on program implementation.

Probably the most immediate change to result from what might be termed the altering of management philosophy was staff reductions in certain areas, one of which was the management systems control program. When the military head of the program retired in 1969, he was replaced by a non-career civilian employee already a member of the staff.¹⁵ At about the same time, one military member completed his reserve obligation and returned to civilian

¹⁴David H. Moran, Director, Management Systems Control Division, Office of the Assistant Secretary of Defense (Comptroller), Private Interview, Washington, D.C., January 12, 1972.

¹⁵The Federal Government has a number of employees who fall into this category. They are neither political appointees nor subject to civil service regulations. Usually they are hired for a limited period of time to perform a special function.

life, and a civil servant in the program was reassigned to another position in OASD(C). By summer 1969 the program was staffed by a civilian director, a military deputy director (Navy), a second military officer (Army), and one clerical assistant.

These staff reductions were a part of the Master Plan as program implementation in the field continued and corrective action on existing management systems was completed. The OASD(C) staff was planned to become a type of nucleus control group. However, the staff reductions were carried out as scheduled even though many of the Master Plan events were almost a full year behind. The significance of this action was not lost on the services which were still weighing the priority to assign a program obviously very difficult to implement.

An even stiffer blow was delivered to the program's prestige in September 1969. "The Office of the Comptroller was reorganized and the responsibility for management systems control was moved to a lower echelon, thereby de-emphasizing, or appearing to de-emphasize, this activity."¹⁶ Hence, rather than reporting to Mr. George Bergquist, the Deputy Assistant Secretary, the Director of Management Systems Control now reported to a lower level bureaucrat and the Directorate became a division. At the same time Mr. Bergquist's staff title was changed from Deputy Assistant Secretary for Management Systems Development to Deputy Assistant Secretary for Systems Policy and Information.

¹⁶Blue Ribbon Report, p. 82.

The timing of the reorganization made it even worse than it seemed. Because of [Col.] Buesking's close relationship with Dr. Anthony, we always dealt directly with the top man. But the reorganization, following on the heels of Buesking's departure--then we didn't even have a direct line to George [Bergquist].¹⁷

The services were not the only principals questioning the program's future. In a rather sharply worded letter to Deputy Secretary Packard, Mr. J.S. Parker, now the Executive Vice President of General Electric, stated:

An enormous amount of top-level effort . . . has gone into the work . . . over the past three years, and we are convinced that appropriate implementation can bring about substantial savings. As a matter of fact there have been some estimates that as much as a dollar out of every seven that DOD spends for weapons systems represents the cost impact of management systems established for that particular purpose. . . .

. . . important benefits can be derived from the implementation of this project work, and . . . it does not appear to be receiving the high-level endorsement and support which will be required to make it effective. . . .¹⁸

Mr. Packard's response was cordial, and he even agreed to the possibility of a meeting with Mr. Parker and other representatives of industry to review the problem anew. That meeting was never to take place. Also Mr. Packard made clear the OSD position on centralized authority.

Mel Laird and I have delegated the responsibility and authority for operating decisions to the Service Secretaries and through them to the weapons systems project managers. It is their decision as to what is needed for proper management of their projects. . . .¹⁹

¹⁷Moran, Private Interview.

¹⁸Letter dated October 24, 1969 was sent by Mr. Parker in his capacity as Chairman, Management Systems Steering Group, CODSIA.

¹⁹Letter dated November 4, 1969.

There was to be more correspondence between the two on the subject, but Mr. Packard never wavered from his position.

The final major policy consideration concerns the work of the Review/Analysis Groups (RAGS) whose function was to provide a baseline for the correction or cancellation of existing management systems. This last increment of the Master Plan was considered by many to be one of the most important features of the entire program because the recommendations of the RAGS were suppose to outline the work necessary to make all the management systems in the AMSL measure up to the established criteria.

The method to be used in reviewing and analyzing each management system was similar to that earlier used by the Advisory Committee in its need/use analysis. Each item on the current AMSL would be measured against the criteria set forth in DOD Instructions 7000.6 and 7000.7. Seven separate RAGS, again jointly staffed by DOD and industry, would each consider all the documents within a particular functional classification (i.e., logistic, finance, data management, personnel, etc.). Upon completion of the review, the RAGS would recommend with justification either approval, modification, or deletion for each document.

The RAGS commenced work in January 1970 and completed their reviews in April. Out of a total of 889 documents considered, only 168 were deemed management systems suitable for listing in the AMSL and some of them needed modification to fit the criteria. Significantly the work of these groups was lauded by ASD(C) because the results promised to reduce the total number

of management systems on the AMSL thus proving to CODSIA that the program was working--management systems were being controlled. Ironically, industry initially applauded the RAGS recommendations thinking that the systems deleted from the list were to be cancelled.²⁰

The industry reps were the heavy handed ones in recommending deletion from the AMSL, because they thought it was synonymous with cancellation. When they found out that the respective services would decide on final disposition, they were really chafed. Of course, we recognized that the RAGS operation provided the services with another opportunity to bail out of the program.²¹

Based on the assumption that unilateral change to AMSL entries was not in keeping with decentralized management, the recommendation package was passed to each service and DSA for their approval. Most of the recommendations were approved especially when the services interpreted the term "delete" to mean remove from the list but not necessarily cancel. The AMSL printed in July 1970 was a slim package of 168 documents. The manager in the field had new voice for his old argument, "if it isn't on the list it isn't a management system," and the last vestige of centralized authority, the AMSL, was a much deflated control device.

Policy developments during the implementation phase had altered the

²⁰Lowry, Private Interview. According to Mr. Lowry, the industry level expertise on the RAGS was less than that represented on the earlier Need/Use Analysis Groups. He felt that there may have been a tendency to delete systems under the assumption that fewer systems meant less control.

²¹Moran, Private Interview. The writer, conversely, recalls that the service "bail-out" potential did not become obvious until some of the descriptive terms (such as "delete") were defined after the RAGS made their recommendations.

entire concept of a rigidly controlled program with virtually total authority vested in a central steering group within OASD(C). These developments were, primarily, the result of changes in the DOD civilian hierarchy and concomitant changes in management philosophy. Mr. Packard obviously was most sincere in his statement that operating decisions belonged to the service secretaries, and the ASD's were going to follow Mr. Packard's orders.

Field Level Reviews

During the 1968 to 1970 implementation time period, the Management Systems Control Directorate made two field level reviews. The first of these, originally scheduled for the latter part of 1968, finally was started almost a year later. There were a number of reasons for the delay; however, the primary cause was the belated ASPR coverage. A formal report on the review was submitted to the Comptroller in March 1970, and its most notable feature was a glowing optimism for the program's future.

It is felt that the depth to which focal points [a person or office assigned to supervise the program's operation] have been assigned and implementing documents have been generated underscores the commitment made by the Military Departments and Defense Agencies to the implementation of the program.²²

Indeed the report contained an impressive list of people and offices who had been designated to insure the program's success at the individual activities.

²²First Implementation Review Report, March 30, 1970, p. 1.

The report also emphasized the breadth of implementation by citing an array of contract instruments on which the program had been applied. Although the program was staggering under numerous implementation problems, the report dismissed clues as their intensity with an almost cavalier attitude. After labeling "communication" as the most serious problem in the field, the report likened it to the proverbial "joke-around-the-table" routine and then offered nothing in the way of corrective measures. Complaints about the AMSL were recognized as genuine; however, those would somehow be taken care of by scheduled purges before subsequent editions were released to the field.

More significant than what the report did say was what it did not. No attempt whatever was made to determine whether or not the program had in any way served as a tool for the manager in selecting the management systems to be applied to the specific acquisition. Further there was no attempt to judge the management scheme that had been used on the particular acquisitions to which the program concepts had been applied.

The writer can only conjecture the motives of the reviewers who capped their report with the statement that "our face-to-face review led, almost universally, to not only acceptance but acknowledgment of the value of the . . . program by both functional and data managers alike."²³ The value of the program, at least in concept, was not at question in the first field

²³Ibid., p. 2. The reviewers in this instance were also the planners, and it is the opinion of the writer that what they wished to find shaded the report.

level review. The ability of activities to implement the program was, and the review did not provide an answer.

Maybe we didn't ask the right questions. But we felt that the people in the field needed more time to settle into the program. After all things were not exactly being pushed from the top. We were satisfied that the word was filtering down, at least then. Also the review, if nothing else, was an open declaration of support from OSD personnel.²⁴

In contrast to this observation is the following which reflected a vastly different opinion of the review.

A number of visits have been made by OASD(C) representatives . . . to review . . . program implementation and impact. . . . Personnel interviewed during our visits indicated that the reviews . . . were general in nature and of little significant value. . . . One thing we did notice in our interviews with those individuals having responsibilities for contracts was that they had little motivation to implement the program. There was a lack of understanding of what was intended to be achieved. . . . Some were even unwilling to respond to our questions because they had insufficient knowledge on the subject.²⁵

Comments such as the above and a growing inescapable awareness that the program was indeed experiencing grave credibility problems in the field led to a second review by OASD(C) personnel during the last quarter of 1970. The directions and procedures for conducting this review were quite specific.

- . The methods of management system selection and application will be reviewed.
- . The procedures for preparing the DD Form 1660 will be investigated.
- . [Specially developed] worksheets will be completed for each activity.
- . Selected contracts will be audited for program compliance.²⁶

²⁴Moran, Private Interview.

²⁵Unpublished GAO Report, pp. 39-40.

²⁶Memorandum from Mr. David H. Moran to Management Systems Control Division "Guidance for the Follow-Up Review on Implementation at Field Level," September 17, 1970.

A revision of DOD Instructions 7000.6 and 7000.7 was a scheduled event in the Master Plan, and the reviews were to provide OASD(C) with first hand information on what the new instructions should contain to make them more viable.

The results of the second review were as definitive as they were disheartening to the program's proponents in OASD(C). The Army review highlighted a feature which had been troublesome at the headquarters level from the outset. In that the program was OASD(C) generated, the implementation assignments tended to remain in comptroller channels. In the field these channels are primarily financially oriented with program implementation tacked-on to the financial management functions. The tendency was for the individuals involved to be less than enthusiastic about the program as well as being outside their respective areas of expertise. Further, they were regarded as only financial managers by the parallel functional managers who should be the users of the program.²⁷

The Air Force, which had been the first service to complain officially that the program was "lacking in substantive value and impossible to effectively implement," was busily proving the correctness of their original observations.

The Air Force, as a whole, is implementing under pressure. They are doing the minimum. . . . Listings in the AMSL are incomplete . . . and

²⁷Memorandum from LtCol. A.T. Ledwidge to Mr. Moran, "Army Follow-Up Review. . . ," December 11, 1970.

command levels . . . waive parts of the program requirements. They can see little advantage to the program.²⁸

Findings in the Navy were most discouraging of all to the reviewers. Implementation was minimal and ineffective. No activity reviewed and no person in authority at the activity regarded the program as a valid, effective management tool. "It represented nothing more than a vertically imposed control."²⁹

The reviews collectively suggested three actions which would make the program more viable.

1. Issuance of a much revised and simplified DOD Instruction combining 7000.6 and 7000.7.
2. A return to a pre-RAGS management system inventory in order to rebuild the AMSL into a useful document.
3. A statement of top level support for the program issued concomitant to the revised instruction.

The Navy review report, which agreeing with the above approach, stated that those actions without others was tantamount to treating the symptoms rather than the disease.

These endeavors . . . will propel the program for a period. But in order to be fully embraced by the field, the program should be clearly demonstrable as an effective tool in the indescribably complex field of

²⁸Draft Review on Air Force Implementation prepared by D.H. Moran, January 12, 1971.

²⁹Memorandum from the writer to Mr. Moran, "Navy Follow-Up Review. . . , " December 30, 1970.

acquisition management. We should investigate fully the areas where the program has shown potential and attempt to document . . . that which the program has or could have done. Once we have defined our product, we must, through the services, sell it to the field.³⁰

None of these recommendations, in fact the entire review report, ever left the office of the Director of the Management Systems Control Division. When questioned later on his reasons for not forwarding the report to ASD(C), he replied that it was such a damaging estimate of the program's accomplishments he feared the entire effort would be scuttled.³¹

Again the writer can only conjecture what effect the review report may have had on top management. It is, however, a reasonable conclusion that ASD(C) and his assistant, Mr. Bergquist, made several crucial decisions on the program's future based on the assumption that the program, while perhaps not working as well as originally envisioned, was serving to reduce management systems proliferation. The second review showed conclusively that this was not the case.

The first of these decisions was to allow the charter for the DOD-CODSIA Advisory Committee for Management Systems Control to lapse. The second was to direct a total revision of DOD Instructions 7000.6 and 7000.7 with a view toward eliminating all elements of centralized control. The third was to effectively modify the charter of the Management Systems Control Division by

³⁰Ibid.

³¹Comment to the writer, January 1970.

further staff reductions and a dilution of responsibility. The result of these cumulative decisions was to preserve the program in name only.

On December 29, 1970 the Deputy Secretary of Defense advised CODSIA via letter that the charter for the Advisory Committee would not be renewed; however, DOD wished to continue informal coordination and would appreciate industry comments on the proposed revision to the basic instructions. There were two replies from industry, the first from the Chairman of CODSIA was very direct, almost accusatory: .

. . . CODSIA has for some time had serious concern regarding the lack of success in achieving the originally planned objectives. This we feel is largely attributable to inadequate implementation of the established control discipline and only limited pursuit of other important actions planned for . . . the program.

. . . the proposed revisions [to DOD Instructions 7000.6 and 7000.7] would virtually eliminate centralized control over management systems and would . . . amount to a revision to the situation which led to the need and establishment of DOD Directive 7000.1 and the joint DOD-Industry program in 1966.³²

The second reply from Mr. Parker, an old friend of Mr. Packard and chairman of the original SMAG, was somewhat warmer but no less direct.

Despite a lot of good work there has unfortunately been little real accomplishment toward the reduction of costly, redundant, conflicting, and the inconsistent application of management systems requirements being placed upon industry. We cannot visualize the resolution of this situation without centralized and disciplined action by OSD--at least initially to get the show on the road.³³

³²Letter from Mr. Robert E. Beach to Mr. Packard, February 1, 1971.

³³Letter from J.S. Parker, Vice Chairman of the Board, General Electric Company to Mr. Packard, February 22, 1971. The letter was addressed to "Dear Dave" and signed "Jack."

The replies received the same treatment--the content was ignored and neither was answered. Plans for the Comptroller to retire from the arena of management systems control were already in progress. The new DOD Instruction 7000.6 reduced the old pair from thirty-nine pages to four. Further it provided for OASD(C) to do little more than keep the AMSL updated. All other authority was divested to the services who in turn could redelegate it to the field activities where the problems originated in the first place. Coordination on the new instructions among the assistant secretaries and the service chiefs was no problem for obvious reasons--there were no specific requirements and no specific controls--and the new DOD Instruction 7000.6 was signed into effect on March 15, 1971. Reduced to the lowest common denominator, the instruction represented little more than a broad policy statement urging sound management systems control. Shortly after the instruction was published, the AMSL was reissued incorporating the changes necessary to bring it parallel to the instruction.

The Management System Control Division was further reduced by one military member, who was to be detached without relief, and the second military member who was due for summer rotation was to be replaced by a civil servant deposed from another OASD(C) office by a reduction-in-force.

Whether top management chose to recognize the fact or not, program implementation had been a failure, and they had been so advised by their counterparts from industry. Significantly, the program never actually functioned with anything more than the appearance of centralized control.

A moratorium was placed on the systems approval feature and the respective services had the last word on the RAGS recommendations. But even the appearance of such a control mechanism was sufficient to make the program grossly unpopular at the respective service headquarters--an unpopularity which translated to a "show-me" attitude in the field.

The Management Systems Control Division had neither the time, the resources or the top level support to effectively overcome that attitude. Further it is the opinion of the writer that the second field level review showed that personnel assigned to the Management Systems Control Division did not have the experience or expertise to effectively demonstrate how the program should work in actual practice.³⁴

Between aspiration and accomplishment had fallen the shadow, and the fledging program of summer 1968 was defunct, except in name, by the end of March 1971.

³⁴This comment is not meant to reflect on the competence of personnel in the division. In fact the functional managers in the field were the ones who could have translated the program concepts into viable tools. Notwithstanding, the "show me how" plea was heard from the very beginning and should have been the signal for early, aggressive action by the program planners.

CHAPTER V

SUMMARY AND CONCLUSIONS

Summary

The purpose of this thesis research project has been to study the program jointly developed by the Department of Defense and the defense industries to control the proliferation of management systems. Meeting this purpose required a brief sketch of the background circumstances that highlighted the problem which the program was to counter. Management systems are an accepted, necessary part of the acquisition process and should be of value to the manager rather than burdening him with unnecessary paperwork. Similarly, industry should not be burdened with having to provide useless management information.

The scope of the study was limited to the development and implementation of policies and procedures for management systems control rather than investigating any particular management systems. Also, the scope was narrowed to a specific time frame. Three possible values of the study were highlighted:

a knowledge of how the management systems control problem was approached may help guide similar future efforts;

the historical perspective may serve the still on-going Acquisition Management Systems Program; and

the detailed investigation would clarify a number of decisions which the writer heretofore could not fathom.

Information for the project has been predominately primary, with the author drawing heavily on his own memory and the memories of those associated with the program especially during the 1968 to 1971 period. This approach has not been without problems as the writer tried to maintain his own objectivity while, at the same time, reporting events as remembered and translated by others. Similarly, the writer, perhaps to a fault, has attempted to eliminate or disguise what might be termed the internal communications of decision making--the thinking out loud which fellow travelers hear but are duty bound not to repeat.

Chapter II of the study discussed in detail the need for management systems control in DOD. One of the most thorny problems--a problem which has persisted throughout the life of the program--was to provide a satisfactory definition for the term "management system." There had been no shortage of attempts at defining the term. Industry provided several offerings, and the new Defense Comptroller gave the old phrases a couple of new twists when he came to office in late 1965. The policy definition published in 1968 was long, detailed, and still ambiguous. It probably represented the best thinking to

date; however, the concept of management systems control is an elusive one. The attendant definition did not--could not--embrace the entire world of management systems and at the same time exclude all the imposters.

The initial stimulus for action on the management system proliferation program came from industry. Even though industry's customers, DOD in this case, paid the bill for the cost of management systems, industry was anxious to see the problem improved for a number of practical reasons. First, the organization of DOD and its demands for management data were so immense that industry felt pricing the output properly might not be possible. Second, industry considered some management control an unwarranted encroachment on their internal operations, and they were anxious to have done with those. Third, they were concerned about their ability to honestly comply with the often conflicting controls and the morale implications implicit in trying to untangle disparate government requirements. Finally, there was the genuine motive of giving the customer his money's worth--something which the proliferation of management systems was denying DOD.

Industry spent nine months preparing an exhaustive report which both lent credence to the extent of the problem and suggested the basic program for providing a solution. The essence of this program was:

- . Joint DOD-industry cooperation in future management systems planning.
- . Established policies and procedures for DOD management systems.
- . Centralized control of management systems at the highest possible level in OSD.

Industry's SMAG Report was an impressive work, and was submitted to the top officials in DOD and CODSIA. The Report, which was to become the basic framework for the management systems control program, was closely knit to the DOD-contractor procurement interface. The industry approach to the problem was a procurement approach and the proposed solutions were procurement oriented solutions. In DOD procurement was under the purview of ASD(I&L).

The presentation by industry probably came as no surprise to the DOD officials, and the final section of Chapter II provided a brief review why. However, the man who was doing most of the talking about "management control systems" in DOD was not ASD(I&L) but rather the new Comptroller. Significantly, Dr. Anthony was aware of the gravity of the problem even in late 1965, exactly when industry was doing the planning to be presented in the SMAG Report. Although his concept of what management control meant was not dissimilar to that presented in the Report, Dr. Anthony apparently was not convinced that the soon to be inaugurated management systems control program deserved a high priority among his multiple responsibilities.

Certainly there was no doubt that DOD must respond to the mutually professed problem of management systems proliferation. The question, "Why Management Systems Control?" had been answered.

Chapter III centered on the efforts involved in establishing a control program within DOD. The first step was to appoint someone to take the lead. With the signing of DOD Directive 7000.1, that someone became Dr. Anthony.

The broad range of authority and responsibility assigned to the Comptroller was not a popular decision in most corners of the Pentagon. There were a number of reasons for the generally negative response received by the new Directive. First, it cut a wide swath across many heretofore sacrosanct grounds of authority. Second, the language of the Directive was conceptual in nature allowing a broad range of interpretations, none of which served to diminish the authority vested in Dr. Anthony. Third, Dr. Anthony's interpretation of his authority under the new charter was extremely broad. His references to the aggregate of "men, material, and services" left little doubt that to him responsibility for resource management systems covered the entire world of Pentagon management.

Regardless of the particular interpretation one placed on the new authority implicit in the Directive, Dr. Anthony predictably was the choice to head the joint defense-industry effort on management system control. Further, the Directive seemed to answer industry's key requirement for centralized responsibility for management systems.

The establishment of a control program seemed to be on track; however, this section was closed with a note of caution in expecting rapid management changes in a bureaucratic atmosphere inimical both to rapidity and to change.

The second section of Chapter III, which seems a discourse unto itself, becomes important when viewed in the total perspective of both Pentagon and DOD management philosophy. Essential in that perspective is an understanding that even prior to Dr. Anthony, the Comptroller was probably the most

powerful man in DOD, next to the Secretary. Further, this is a power which is more a part of the office than of the particular incumbent. The Comptroller is central to the defense organization, and his influence rests on four pillars: theoretical, legal, functional, and personal.

The theoretical pillar is the power of the purse which is extremely important in the Comptroller's dealings with the other ASD's and crucially important in the pragmatic control of the military chiefs. The legal pillar is an outgrowth of the Hoover Commission. By law the Comptroller has certain charters and responsibilities relative to the defense budget which place him outside the control of anyone in the Department, including the Secretary. Also due to the Hoover Commission, the Comptroller became a functional unique among federal agencies. Working hand-in-glove with the Office of Management and Budget, his office is the internal mechanism of restraint and control reflecting external demands and interests. The fourth pillar is one of personality--perhaps an outgrowth of the first Comptroller, who established himself and his office as a leader among leaders. In short, the Comptroller already was deep in matters of strategy and policy when Dr. Anthony and Resource Management Systems were superimposed on the scene.

Seemingly the ideal appointee to provide new depth and wisdom to defense management, there is ample evidence to show that neither the man nor his concept of resource management systems ever achieved sufficient acceptance to bring his ideas to fruition. The strange mixture of the power of the position

and the nature of the incumbent was not conducive to the type of contribution Dr. Anthony wished to make.

Within this framework of power, personality, and management philosophy, the final portion of the section deals with the relative priority assigned to the management systems control program. The program was not the most important or even one of the most important contributions in Dr. Anthony's plans, and he repeatedly said as much. It was apparent, or should have been, that the management systems control program not only would face a hostile environment but also would persist or fail on its own merits. Little or no top level support would be forthcoming.

The final section of Chapter III details the Master Plan for the management systems control program. As proposed by the SMAG Report, the plan was developed under the purview of a jointly staffed DOD-CODSIA Advisory Committee. Resources assigned by the Comptroller appeared adequate to the task, and industry staffing was the same group which had prepared the favorably accepted SMAG Report.

A three-phased Master Plan was developed by the Committee, the first phase of which was acceptance of the Plan by DOD and industry. The second phase, which constituted the bulk of work performed during the subsequent sixteen months, involved management systems documentation, analysis, preparation of instructions, and drafting a report of findings.

The essence of management systems documentation was to compile the initial inventory of systems in order to acquire some measure of the work to

be done in bringing those systems into alignment with predetermined standards and criteria. Indeed the inventory effort itself was no small task, especially in view of the problems surrounding the definition of a management system. The inventory, which was comprised of approximately 1200 documents was then subjected to a joint need/use analysis to determine which ones were both "needed" and "usable" as management systems by DOD.

Concomitant to the work of these analytical review groups, other teams were preparing the tools and control mechanism to prevent the uncontrolled development of management systems in the future. The product of these teams was:

- . Proposed policy for developing new management systems.
- . Proposed policy for applying management systems on contracts.
- . Essential definitions and criteria to be used in management systems control.
- . Further plans for implementing the program during Phase III.

When the Advisory Committee made its report to the Comptroller in March, 1968, they viewed their remaining tasks as preventive--forestalling undesirable proliferation--and corrective--reducing the existing proliferation. For the first, the tools were at hand; two new instructions and the AMSL. The preventive tools were highly centralized, and the mechanism of control extremely rigorous. For the second task, correction of existing systems, the plan was to attack that problem after the instructions and the AMSL had been introduced to the field.

Already there were forces at work disruptive to the success of the program. Two of these forces were the basic policy instructions which were long, abstruse, theoretical documents surely destined to confuse unless the service headquarters carefully marshalled implementing procedures. A third force was the changing management environment in the Pentagon. Power politics and the dukes of the new management mold were departing, one by one. Also departing was the policy of centralized control from the top levels of the Office of the Secretary of Defense. In June 1968, the embryonic management systems control program was projected into this environment.

The preceeding Chapter IV showed the attempt to translate over two years of planning by industry and defense into a viable program at the field level. The procedures by which Department of Defense instructions are normally implemented were detailed as were some of the early problems which the service headquarters and lower level commands allegedly had in carrying out those procedures. The Instructions from the start were not popular, and the pragmatic problems with implementing them were not the only reasons. The review and approval cycle for new and revised systems was, understandably, thought to be most unrealistic. Further, the Office of the Assistant Secretary of Defense, Comptroller "final approval concept" on matters previously considered to be within the purview of the operational commanders was singularly objectionable.

A consequence of these early implementation problems was a relaxing of the review and approval procedures. The Comptroller passed that

responsibility to the services eight months after the Instructions (7000.6 and 7000.7) were issued and during which time not a single new or revised system was reported. Industry objected strongly to this action; however, the centralized control procedures clearly were unenforcable. The "moratorium" was the first in a series of actions which heightened industry's anxiety about the program's future.

Problems with the Instructions were not the only early difficulties. The initial list of management systems took much longer than expected to compile, and the items listed reflected the problems in arriving at a satisfactory definition of "management system." Plans to improve the list were vague, and other components within the Office of the Secretary of Defense as well as the services were suspicious of the Comptroller's authority to unilaterally direct that systems be cancelled or modified. The net result was the belated issuance of the first Acquisition Management Systems List, a document poorer in both structure and content than the field had reason to expect. If the potential users of this new management tool had been waiting for the AMSL to redeem the program's virtues, they were disappointed. Earlier attempts to reduce both the bulk and content of the AMSL were successful purges because the services were only too happy to see their documents drop from public scrutiny. Unfortunately those attempts did not make the list more useful or acceptable.

Internally OASD(C) was having problems with the AMSL. Procedures for handling minor nonsubstantive changes, printing, and distribution were

not very effective. Through time a number of problems with the AMSL were resolved; however, the resulting improvements did little to improve the program's credibility in the field.

An essential element in successful implementation was to secure prompt coverage for the program in ASPR. Slippage in the Master Plan schedule and some unexpected coordination problems between OASD(C), the ASPR Committee, and interested Department of Defense components resulted in coverage not being effected until eleven months after program implementation, and then the language used was no more descriptive than that contained in the basic instructions.

The four major top level contributions--two instructions, the AMSL, and ASPR coverage--hardly had provided an auspicious send-off for the program.

In the second section of Chapter IV, the field level control and coordination procedures were presented. The program was largely self-monitoring except for the review and approval cycle. Consequently, the activities were left to their own devices to establish the mechanism to insure compliance with the program concepts at the contractor interface level.

There were at least two reasons and one very simple way to avoid such compliance. First, the AMSL was not a reliable tool for the acquisition manager. All management systems were not listed and many that were listed served only to confuse the user on what the AMSL really should contain. Second, the responsibility for reviewing and approving the DD Form 1660 was not clear. This form was the only visible interface between the manager,

who was selecting the management systems for a particular acquisition, and the contracting officer, who would write the form into the contract. Too often the contracting officer was cast (or cast himself) in the role of approving the total management scheme, a function never envisioned or sanctioned by OASD(C). To avoid this situation, the acquisition manager would fulfill ASPR requirements and placate the contracting officer by listing one or two innocuous systems on the DD Form 1660. The actual management control devices were buried in other parts of the contract. Even when cooperation between the acquisition manager and the contracting officers was excellent, the DD Form 1660 often was regarded as little more than a nuisance by either or both.

Attempts by OASD(C) to bolster field support via a formal training program faded and lost initiative when the first AMSL and ASPR coverage were late. Field visits had little value other than some Hawthorne type effects.

Difficulties with the management systems control program were not all in the field. Within the Pentagon the philosophy of management was changing and so was the program. Staffing reductions and a reorganization downward affected both the capabilities and the prestige of the program staff. Protests by industry that DOD was not behind the program were answered directly by Mr. Packard who expressed the new philosophy--the program should work in a decentralized environment as well as in a centralized one.

The corrective feature of the program, under the policy guidance of

the Comptroller, was stumbling toward debilitating results. The RAGS, for any number of uncertain reasons, reduced the AMSL to about one-fifth its former size. The services gleefully agreed to this massive reduction and effective control was lost over what probably were, at least in part, bonafide management control documents. The inventory base line had been lost and ASD(C) was applauding the AMSL purge as a meaningful reduction of management systems. The full implication of these reductions did not really become clear until the second field level review.

The final section of Chapter IV was a report on the two field level reviews. The first, completed in March 1970, indicated that the program generally was being implemented according to schedule. Acknowledging that there were some problems, the report submitted to ASD(C) stated the program was receiving the support and commitment of field level activities. The writer maintains that the objectivity of this first review is questionable. The reviewers were the planners and they saw, by-in-large, exactly what they wanted to see.

A General Accounting Office report completed several months later (but never submitted to ASD(C)) reflected mounting problems in field level implementation. As a result of this report, a growing awareness that the program was not so healthy as the first review maintained, and a scheduled revision to the basic instructions, a second review effort was conducted in the fall of 1970. The directions and procedures for conducting this review were more specific--and so were the findings.

Implementation in both form and substance was sketchy at all but a few activities and totally nonexistent at some. In short, the program was not working, and there seemed little reason to believe it ever would under the current conditions. The reviewers made four recommendations:

1. An improved instruction based on information gained in the review.
2. Reestablish a base line management system inventory.
3. A new statement of top level support.
4. A case study training effort which would document and demonstrate the program's value before "selling" it to the field.

Neither the report nor these recommendations were provided ASD(C) and, in view of the tremendous pressure toward absolute decentralization, one can only conjecture what their impact would have been. However, the information may have provided a more enlightened environment for several subsequent decision on the program's future. As it was, the Advisory Committee charter was allowed to expire, the instruction and the AMSL were revised to reflect total decentralization, and the continued protestations of industry--which was the originator of the management systems control effort--were ignored.

The issuance of a revised Department of Defense Instruction 7000.6 in March 1971 and concomitant staff reductions reduced the management systems control program to what the former Advisory Committee chairman called "a type of quiet holding operation."

Conclusions

This study has attempted to answer, both explicitly and implicitly, certain questions relative to the joint work of the Department of Defense and the defense industries in developing a program for the control of management systems.

The major question was:

- Should the Department of Defense control management systems used in the acquisition process?

Other questions for which the research was intended to provide answers were:

- What are acquisition management systems?
- What is the interest of the defense industries in management systems control?
- How was the program for management systems control established?
- Why was the Assistant Secretary of Defense (Comptroller) selected to head the program?
- Has the management systems control program been effectively utilized by the field level activities?
- Can the Office of the Secretary of Defense effectively exercise top level control of management systems?

On the basis of the research conducted and presented in Chapters II through IV of this study, the following conclusions have been reached.

The cost of management systems represents a substantial portion of the total tax dollar spent on defense. Various estimates place the cost of the systems at:

- . 10 per cent of the defense budget;
- . one dollar out of seven spent on defense; and
- . two billion to four and one-half billion dollars annually.

Whichever estimate one selects or even adjusts downward by 100 per cent, it seems obvious that the Department of Defense would be anxious to insure the cost was properly incurred and the information received was of value to the acquisition manager. Regrettably, this is not always the case because of the functional interests impacting on each major acquisition. Often the manager is "required" to buy a great deal of information not needed by him but ostensibly for use by some higher authority. Some studies have indicated that as much as 80 per cent of the management information purchased by the acquisition manager is not for his own needs but rather because of the demands placed on him by others.

The normative answer to this major question must be an unequivocal "yes." Certainly the Department of Defense should control management systems used in the acquisition process, just as any responsible public office should control the expenditures it makes ostensibly in the public interest. Whether or not DOD is capable of exercising that control is answered in part by a consideration of the subsidiary questions.

There is no totally satisfactory definition for an "acquisition

management system," "management control system," or "resource management system." The very fact that these three terms refer generally to the same concept is mute testimony to the fact that a single definition can never mean exactly the same to all who use it. There is no doubt that of the several, similar definitions used or proposed, any one of them would suffice for the purposes of control. The difficulty with the definition, while certainly honest to a few, was not insurmountable especially for the experienced manager.

In retrospect it seems that the trouble with the definition of a management system, while certainly annoying, would not have been so troublesome had other features of the program been more supported by the Office of the Secretary of Defense and the field level activities. After the purge of the initial list, most persons involved with the program were able to evaluate whether a particular document might be usable on a contract and cause the contractor to provide information for use by management. The writer, after several weeks experience and no prior special training, achieved a 90 per cent agreement factor with a committee evaluation of whether or not a particular document constituted a management system within the established definition. Similar results were obtained testing other people active in the program.

The writer can only conclude that the definition included in Chapter II, and only slightly abbreviated in the March 1971 instruction revision, was a satisfactory one. That it may have caused problems to the uninitiated is

probably true. However, to say that the program foundered because of a faulty definition of the term "management system" cannot be supported.

Initial efforts in management systems control were those of industry. Theirs was the first major investment of time and resources, and their interest was genuine. Proliferation was an unnecessary expense both to industry and certainly to the Department of Defense. Both would gain from a successful control program. Although not a part of this study, there were a number of attempts to impugn the motives of industry in advocating and supporting the program. There were of course times when the interest of industry and DOD were not parallel, and these differences had to be resolved. However, nothing in the files of the Aerospace Industries Association of America, Inc., the Council of Defense and Space Industries Association, or from the writer's personal experience ever suggested that the defense industries or any individuals were colluding against the best interests of the Department of Defense and the taxpayer.

Even to the end industry was not willing to call the effort a sunk cost and forget it. Only when Mr. Packard made it obvious that DOD was finished with the joint effort did CODSIA cease and desist in attempting to regenerate top level support for the program. As a related matter, CODSIA recently prepared an exhaustive white paper on the program, the central theme of which is that management systems control cannot work in a decentralized environment.

There is less support for the genuineness of the motives of OSD in

supporting the management systems control program than for industry's motive in proposing the program. During the interview with Mr. Fitzgerald, he suggested that Dr. Anthony recognized the seriousness of management problems associated with investment costs but had to decide which to treat first. Operating cost problems seemed to promise the greater payback. Consequently, OSD was receptive to industry's SMAG Report and the proposed joint program because it took the immediate pressure off in an area where industry apparently was determined to see some results.

In short, OSD's support was without commitment. The program was a natural tag-on to the resource management system program being generated by the Comptroller to treat the one type of cost problems. The "how" of management systems control then was answered easily. Industry had practically demanded centralized, top level control, and the Comptroller's operation had both the inclination and the resources to carry off the program.

The same heavy-handed approach was used in developing the management systems control program as was used in Project PRIME. The lower echelons, who would have to implement the program, had practically no input to the Advisory Committee. Potentially troublesome issues were resolved conceptually but not pragmatically. Early objections were dismissed as unimportant on the larger scale. However, implementation would take place at the field level--on the small scale. When the management systems control program sprang full grown from OASD(C) most major acquisition activities

had never heard of it. They were, predictably, both resentful and resistive to the vertically imposed procedures.

The second implementation review showed the program had become a liability both to the acquisition managers and the contracting officers. Further, there was little indication that the program ever had been of any value to most of the field level activities. In a few isolated cases the major benefit seemed to be that the program had stimulated some thought on the cost and nature of the management control process. Having arrived at this thought, the manager found little in the program's tools to provide much assistance. Significantly, in those activities where the concept of the program was best understood, the management plans used in the major acquisitions generally were satisfactory before the program.

If the concept of the management systems control program was sound, it seemed those activities which needed it most were the least capable of understanding what the program was meant to accomplish. The writer concludes that little of value ever made the tortuous passage from the OASD(C) conceptual planning and development stage to pragmatic implementation. The program was not utilized by the field level activities, and there was neither the support or the inclination on the part of ASD(C) to force the issue.

Finally this study has treated implicitly a number of the problems involved in the top level control of the management systems control program. There is no doubt that the authority of OSD is sufficient to impose this type of program and make it work or at least give it the appearance of working.

Such an approach could not be justified in the case of management systems control. In fact the success of the program depended on the ability and inclination of the various acquisition managers. They were the ones, the only ones, who could take the abstractions of the basis instructions and translate them into a viable scheme for management control. The conceptual planners did not sufficiently consider the practical interface problems among these managers, the contracting officers and the contractors. Had the personnel in the field seen value in the program, the only controls needed at the OSD level would have been some type of monitoring action.

The writer concludes that the continued emphasis on top level, centralized control obscured the more fundamental problems in program planning and implementation. While this type of control may have been feasible under the so-called McNamara management philosophy, it was not suitable to the management systems control program which demanded rank-and-file support. Further, the author concludes that the concept of controlling management systems used in the acquisition process is sound, and in time a formal program to achieve this end will be revitalized within the Department of Defense. The structure and approach of such a program could be made the subject of future research and evaluation.

APPENDIX A

ACRONYMS AND TERMINOLOGY

Acronyms

AIA	Aerospace Industries Association of America, Incorporated
AMSL	Acquisition Management Systems List
ASD(C)	Assistant Secretary of Defense, Comptroller
ASD(I&L)	Assistant Secretary of Defense, Installation and Logistics
ASPR	Armed Services Procurement Regulation
BOB	Bureau of the Budget (OMB since 1970)
CODSIA	Council of Defense and Space Industries Association
DDR&E	Director of Defense Research and Engineering
DOD	Department of Defense
DSA	Defense Supply Agency
GAO	General Accounting Office
NASA	National Aeronautical and Space Administration
OASD	Office of the Assistant Secretary of Defense - used to distinguish the entire organization as opposed to the Assistant Secretary of Defense (ASD)
OMB	Office of Management and Budget (formerly BOB)

OSD	Office of the Secretary of Defense - used to distinguish the entire organization as opposed to the Secretary
PRIME	<u>PR</u> Iority <u>Ma</u> ngement <u>E</u> fforts
RAGS	Review Analysis Groups
RMS	Resource Management Systems
SMAG	Systems Management Advisory Group of the Aerospace Industries Association of America, Inc.

Terminology

Advisory Committee - The DOD-CODSIA Advisory Committee for Management Systems Control

Acquisition Management Systems Program - the program established to reduce and control proliferation of management systems applied on contracts. Synonymous with "management systems control program."

DD Form 1660 - The Department of Defense form entitled "Management Systems Summary List" and used to show the various systems contractually applied on a particular acquisition. Referred to as the "DD 1660."

BIBLIOGRAPHY

Books

- Anthony, Robert N.; Dearden, John; and Vancil, Richard F. Management Control Systems. Homewood, Illinois: Richard D. Irwin, Inc., 1965.
- Anthony, Robert N., and Walker, Ross Graham. Management Accounting: Text and Cases. Homewood, Illinois: Richard D. Irwin, Inc., 1966.
- Bonini, Charles P.; Jaedicke, Robert K.; and Wagner, Harvey M. Management Controls: New Directions in Basic Research. New York: McGraw-Hill Book Company, 1964.
- Burkhead, Jesse. Government Budgeting. New York: John Wiley & Sons, Inc., 1956.
- Haveman, Robert H., and Margolis, Julius, eds. Public Expenditures and Policy Analysis. Chicago: Markham Publishing Co., 1970.
- Hitch, Charles J., and McKean, Roland N. The Economics of Defense in the Nuclear Age. Cambridge, Mass., Harvard University Press, 1961.
- Huntington, Samuel P. The Soldier and the State. Cambridge, Mass.: Harvard University Press, 1959.
- Janowitz, Morris, ed. The New Military (Changing Patterns of Organization). New York: Russell Sage Foundation, 1964.
- Krauss, Leonard I. Computer-Based Management Information Systems. American Management Association., Inc., 1970.

- Massie, Joseph L. Essentials of Management. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1971.
- Merewitz, Leonard, and Sosnick, Stephen H. The Budget's New Clothes. Chicago: Markham Publishing Co., 1971.
- Mosher, Frederick C. Program Budgeting. Chicago: Public Administration Service, 1954.
- Schoderbek, Peter P., ed. Management Systems. New York: John Wiley & Sons, Inc., 1967.
- Tyrrell, C. Merton. Pentagon Partners, The New Mobility. New York: Crossman Publishers, 1970.
- Yarmolinsky, Adam. The Military Establishment (Its Impacts on American Society). New York: Harper & Row, 1970.

Articles and Periodicals

- Buesking, Albert W., Col USAF, "Management Systems Control." Defense Industry Bulletin, March, 1967, pp. 26-33.
- Morse, G.E. "Pendulum of Management Control." Harvard Business Review, May, 1965, pp. 158-164.
- Moran, David H. "Progress in Controlling Management Systems." Defense Industry Bulletin, December, 1970, pp. 24-25.
- Waller, Edmund M., CDR SC USN, "Joint Defense-Industry Project Produces Proposed System to Regulate Development and Application of Government Management Control Systems." Navy Management Review, August, 1968, pp. 10-15.

Reports and Studies¹

Briefing on Systems Management Controls to the Aerospace Manufacturers Council. The Serious Problem Created by Expanded, Uncoordinated Systems Management Controls. Presented by C.R. Lowry, Director Aerospace Technical Council. Seattle, Washington: July 24, 1965.

Systems Management Analysis Group Interim Report to the AIA Aerospace Manufacturers Council. Presented by Orv Enders. Phoenix, Ariz.: November 18, 1965.

Report on Government Management Systems by the Systems Management Analysis Group of the Aerospace Industries Association. J.S. Parker, chairman. Washington, D.C.: May 12, 1966.

Status Report, DOD-CODSIA Advisory Committee on Management Systems Control. Presented by W.R. Owens. Phoenix, Ariz.: November 8, 1967.

Final Report of the DOD-CODSIA Advisory Committee for Management Systems Control To The Assistant Secretary of Defense (Comptroller) Vols. I-IV, Apps. A-F. George W. Bergquist, chairman. Washington, D.C.: March 28, 1968.

U.S. Comptroller General. Report to the Congress. Implementation of the Accounting System For Operations in the Department of Defense. Washington, D.C.: March 4, 1970.

National Security Industrial Association. Defense Acquisition Study. Washington, D.C.: July 1, 1970.

Report To The President and the Secretary of Defense on the Department of Defense by the Blue Ribbon Defense Panel. Gilbert W. Fitzhugh, chairman. Washington, D.C.: U.S. Government Printing Office, July 1, 1970.

Aerospace Industries Association of America, Inc. Management Systems in Future Government Procurements. Washington, D.C.: July, 1971.

- _____. Aerospace and the U. S. Economy (Its Role, Contributions and Critical Problems). Washington, D. C.: November, 1971.
- _____. Federal Procurement Principles (A Proposal in the National Interest). Washington, D. C.: November, 1971.
- _____. International R & D Trends and Policies (An Analysis of Implications for the U.S.). Washington, D. C.: January, 1972.

Other Sources

- Anthony, Robert N. "What's Ahead." Address to the Washington Chapter, American Society of Military Comptrollers. Washington, D. C.: January 19, 1966.
- _____. "Management Control Systems." Address to the Management Analysis Symposium. Washington, D. C.: February 15, 1966.
 - _____. "Resource Management Systems." Address at the DOD Advance Planning Briefing, for Industry. Boston: March 3, 1966.
 - _____. "Closing the Loop." Address to the Financial Management Roundtable. Washington, D. C.: October 25, 1966.
 - _____. Untitled Statement before the American Ordnance Association. Washington, D. C.: March 16, 1967.
 - _____. Untitled Statement before the DOD/CODSIA Advisory Committee for Management Systems Control. Washington, D. C.: May 9, 1967.

¹For clarity the entries in this subdivision of the bibliography are listed chronologically.

- _____. "Some Problems in Communication." Address to the Federal Government Accountants Symposium. Washington, D. C.: June 14, 1967.
- _____. "Pricing as an Aid to Management." Address to the Procurement Pricing Conference. Washington, D. C.: October 30, 1967.
- _____. "DOD Management Concepts." Address to the National War College. Washington, D. C.: November 30, 1967.
- Bergquist, George M. "Management Systems and Controls," an undelivered statement prepared for the Subcommittee on Economy in Government of the Joint Economic Committee. Washington, D. C.: November 13, 1968.
- Comptroller General of the United States. "Study of the Program Established to Reduce and Control Management Systems Imposed on Defense Contractors." Unpublished preliminary draft of a proposed Report to the Congress. Washington, D. C.: August 12, 1970.
- U.S. Department of Defense. Resource Management Systems. (DOD Directive 7000.1), August 22, 1966.
- _____. The Development of Management Control Systems for Use in the Acquisition Process. (DOD Instruction 7000.6), June 6, 1968.
- _____. The Selection and Application of Management Control Systems in the Acquisition Process. (DOD Instruction 7000.7), June 6, 1968.
- _____. Acquisition Management Systems. (DOD Instruction 7000.6), March 15, 1971.
- _____. Acquisition Management Systems List. (DOD Manual 7000.6M), April, 1971.
- _____. Acquisition of Major Weapon Systems. (DOD Directive 5000.1), July 13, 1971.

Interviews

- Barron, D.R. Major, USAF. Management Systems Control Project Officer, Air Force Systems Command. Private interview, January 11, 1972.
- Bergquist, George W. Deputy Assistant Secretary of Defense, Systems Policy and Information. (Also former chairman, DOD-CODSIA Advisory Committee for Management Systems Control.) Private interview, January 12, 1972.
- Fitzgerald, A. Ernest. Consultant to the Joint Economic Committee of Congress. (Formerly Air Force Deputy for Management Systems.) Private interview, January 10, 1972.
- Frost, S.D., CDR., SC, USN. Executive Assistant to the Assistant Secretary of Defense (Comptroller). Private interview, January 11, 1972.
- Lowry, C.R. Director, Aerospace Research Center. (Formerly Aerospace Industries Association Project Officer for Management Systems Control.) Private interview, January 25, 1972.
- Moran, David H. Director, Management Systems Control Division, Office of the Assistant Secretary of Defense (Comptroller). Private interview, January 12, 1972.
- Wight, Paul. Management Systems Control Project Officer, Department of the Air Force. Private interview, January 11, 1972.

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